EFFECTIVENESS OF PRE OPERATIVE ORIENTATION PROGRAMME ON POST OPERATIVE ANXIETY AMONG THE MOTHERS OF CHILDREN UNDERGOING CARDIAC SURGERY AT A SELECTED SETTING IN CHENNAI

Dissertation submitted to

THE TAMIL NADU Dr.M.G.R.MEDICAL UNIVERSITY

CHENNAI

In partial fulfilment of requirement for the degree of

MASTER OF SCIENCE IN NURSING

APRIL 2016

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LIST OF ABBREVIATIONS

CHD	-	Congenital Heart Disease
ASD	-	Artial Septal Defect
VSD	-	Ventricular Septal Defect
STAI	-	State Trait Anxiety Inventory
RHD	-	Rheumatic Heart Disease
ECHO	-	Echocardiography
DS	-	Downs Syndrome
TOF	-	Tetralogy of Fallot
PS	-	Pulmonary Stenosis
CAA	-	Congenital Airway Anomalies.
COA	-	Coration Of Aorta
PEDI	-	Parent Education Discharge Instruction Programme
PICU	-	Pediatric Intensive Care Unit
BV	-	Biventricle
SV	-	Single Ventricle
NICU	-	Neonatal Intensive Care Unit
CABG	-	Coronary Artery Bypass Grafting
HAIs	-	Health Care Associated Infection
SSI	-	Surgical Site Infection
DD	-	Developmental Delay
OE	-	Observe minus expected
PPT	-	Power Point Presentation

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ABSTRACT

ABSTRACT

A study was conducted to assess the effectiveness of pre operative orientation programme on post operative anxiety among the mothers of children undergoing cardiac surgery at selected hospital in Chennai

Objectives

1. To assess the level of post operative anxiety among the mothers of children undergoing cardiac surgery in the experimental and control group.
2. To compare the effectiveness of pre-operative orientation programme on level of postoperative anxiety among the mothers of children undergoing cardiac surgery between experimental and control group.
3. To associate the level of post operative anxiety among mothers of children undergoing cardiac surgery in the experimental group with their selected demographic variable.

Methodology

A true experimental post test only design was used . The study was conducted at Madras Medical Mission Hospital. 50 samples were selected using simple random sampling technique. Standardized state trait anxiety inventory (STAI) scale was used to assess the anxiety level of mothers. Pre-operative orientation programme which include information transfer programme and hospital tour was given to experimental group. Post operative level of anxiety among mothers were assessed on the 2nd postoperative day for both experimental and control group to assess STAI scale. The collected data was analyzed using both descriptive and inferential statistics.

Findings

With regards to level of state anxiety in experimental group, 18(75%) had moderate anxiety, 7(28%) had mild level anxiety and none of them had severe anxiety and considering the level of anxiety in control group, majority 24(96%) had moderate anxiety and 1 (4%) had severe anxiety.

With regards to trait anxiety of the mothers in experimental group 13(75%) had moderate anxiety and 12(48%) had only mild level anxiety and in control group 23(92%) had moderate anxiety and 2(8%) had severe anxiety.

The mean value of post operative state anxiety of experimental group was 43.36 with standard deviation of 9.48 **(43.36±9.48)** and the control group was 50.08 with standard deviation of 6.02 **(50.08±6.02).** The independent t test value was 3.13 which indicated statistically significant difference between experimental and control group at $p<0.05$.

The average mean post operative trait anxiety of experimental group was 38.8 with standard deviation of 4.9 **(38.8±4.9)** and the control group was 51.16 with standard deviation of 10.9 **(51.16±10.9).** The independent t test value was 5.09 which indicated statistically significant difference between experimental and control group at $p<0.05$.

The findings revealed that there was a statistically significant association was found between the level of postoperative state anxiety and the demographic variable, type of family **(χ^2=4.5 at p=0.05)** level and there was no association for other variable.

The findings revealed that there was a statistically significant association was found between the level of postoperative trait anxiety and the demographic variable occupation **(χ^2=5.15 at p=0.05)** and type of family level **(χ^2=5.54 at p=0.05)** and there was no association for other variable

The findings indicated that mothers in nuclear family had more state anxiety and mothers of unemployed and nuclear family had more trait anxiety.

Conclusion

The study concluded that pre-operative orientation programme was effective in reducing the anxiety level of mothers of children undergoing cardiac surgery.

INTRODUCTION

CHAPTER – 1

INTRODUCTION

1.1 BACKDROUND OF THE STUDY

Heart is the first organ that is formed during conception. The human embryonic heart begins beating approximately 21 days after conception. The fetal heart has the same basic components as the newborn heart, but there is a couple of important differences. Much of the fetus blood is detoured away from the lungs through two openings; the foramen ovale, which connects the right and left atria and the ductus arteriosus, which connects the aorta and the pulmonary artery. These two important connections will remain open up until birth. Within thirty minutes after the baby's first breath, the ductus arteriosus will completely close and the flap of the foramen ovale will shut off like a valve. This happens because of an increase in pressure on the left side of the heart and a decrease on the right side. These changes in the anatomy of the heart causes the blood to flow to the lungs, which will take over their lifelong job of supplying oxygen to the body.

According to the **American Heart Association (2015)** congenital heart defects (CHD) are structural problems with the heart present at the time of birth. They result when a mishap occurs during the development of heart soon after conception and often before the mother is aware that she is pregnant. Defects range in severity from simple problems such as holes between chambers of the heart to very severe malformations such as complete absence of one or more chambers or valves.

The Chulanlongkorn University Thailand, CHD is described as the most common type of birth defect. CHD is considered a major problem affecting public health worldwide which affects 8 per 1000 live births and 2 or 3 of these infants are estimated to have critical disease requiring cardiac catheterization or cardiac surgery. Despite the continuing progress in non surgical and surgical treatments the survival of the majority of the children has increased some complex heart disease are still associated with substantial morbidity and mortality. According to the report by Chulanlongkorn University Thailand 45% of infant deaths owing to congenital anomalies were caused by CHD in Europe. In Latin America, North America, Eastern Europe and the South Pacific

region this proportion has been reported to be 35%, 37%, 42% and 48% respectively. Nearly 20% of spontaneous abortions and 10% of the still births are attributed to CHD (Botto,2001).

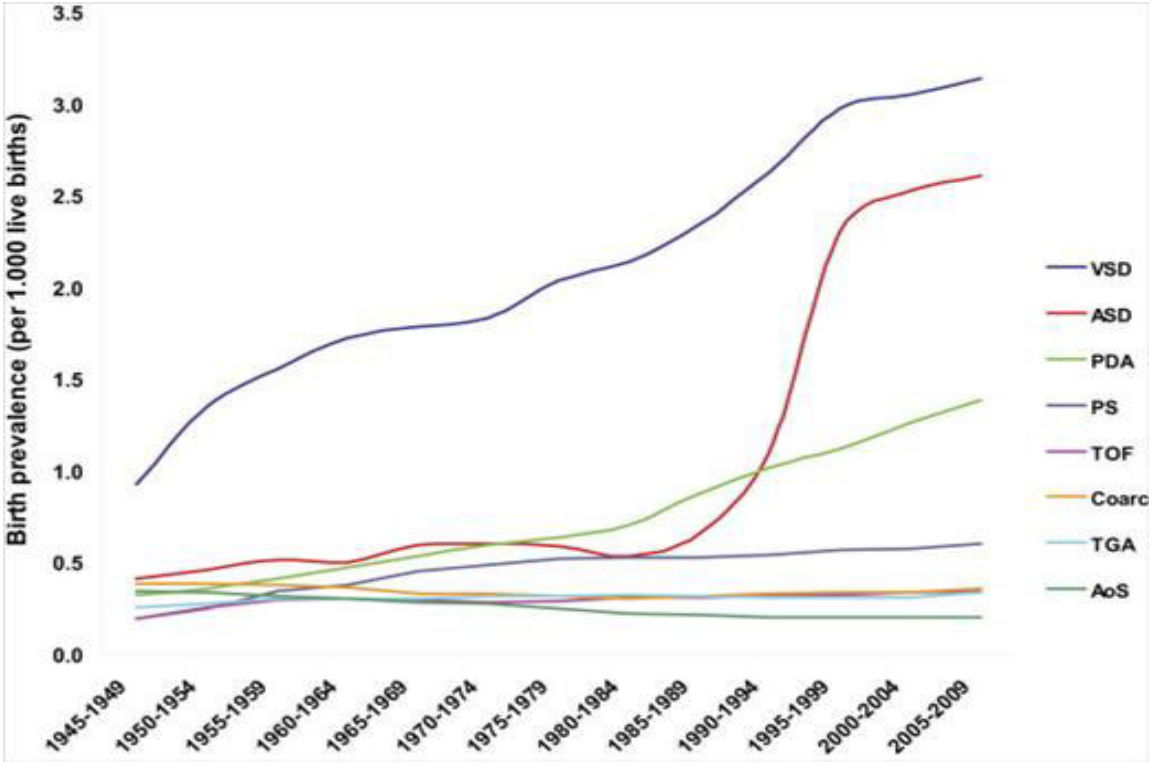

Fig.1.1.1: Birth prevalence of CHD SUBTYPES

Source: Journal of JACC 2011

The birth prevalence of the 8 most common CHD subtypes per continent is mentioned in the above figure. Pulmonary Stenosis (PS) and Tetralogy of Fallot (TOF) birth prevalence in Asia was significantly higher than in Europe ($p<0.001$). Coarctation of the aorta (COA) at birth in Asia was significantly lower than in Europe ($p< 0.001$). The transposition of Great Arteries (TGA) and Aortic Stenosis (AS) birth prevalence in Asia was significantly lower than in Europe ($p <0.001$), North America ($p < 0.001$) and Oceania ($p <0.001$). No data on TOF and AS birth prevalence in Africa were available.

CHD constitute the most common congenital malformation and occur approximately in 0.8% of all live born infants (Eskedal et al 2005). Advances in medical and surgical treatments have led to approximately 85% of these infants surviving in to

adulthood, transforming several previously fatal conditions into potentially survivable conditions offering a chance for prolonged or permanent remission of the underlying defect. Medical and surgical treatments itself might be highly stressful for the infants and their mothers, possibly leaving them with long term medical and psychosocial sequelae of the condition.

The cause of CHD is often unknown. Certain cases may be due to infections during pregnancy such as rubella, use of certain medications or drugs such as alcohol or tobacco, parents being closely related and poor nutritional status or obesity in the mother. Having a parent with heart defect and including either a Down syndrome, Turner syndrome, or Marfan syndrome is more the worst. CHD is divided into two main group cyanotic and acyanotic heart defects. These problems may involve the interior walls of the heart, the heart valves or the large blood vessels that lead to and from the heart

CHD acconts for a high morbidity and mortality among infants and affects the quality of life during childhood and adulthood, depending on the progression of the disease (Majneneret al 2008) . It also affects social interactions and the quality of life of parents of children with CHD. Majority of the newborns with the cardiac disorders are symptomatic and identified soon after birth, while many others are not diagnosed until the disease progresses into an advanced stage. Data from the Northern Region Pediatric Cardiology database suggested around 1 in 4 cases of CHD in the UK are diagnosed in later childhood (Petersen et al 2003). The signs and symptoms of heart disease depends on the type and severity of the disease. Children with critical cardiac lesions generally exhibit high morbidity and mortality as the treatment and diagnosis is delayed.

Over the past 2 decades there has been a remarkable improvement in medical and surgical treatment by successful performance of complete repair during early infancy and staged repair for complex single-ventricle defect. Through the past half century, the diagnosis and treatment of CHD have markedly improved. The surgical mortality has decreased from an average of 15% in 1990 to an average of 5% in 2000(Kenny, 2008).The majority of infants with CHD are now expected to survive into adolescence and adulthood.

Although newer treatments has resulted in significant improvement in survival and disease related morbidity, including psychosocial adjustment problems. Anxiety remains a significant source of concern in spite all these improvements. Anxiety is defined as a set of behavioural manifestations which is present as anxiety status or anxiety trace. The former is considered a transient emotional condition of variable intensity and fluctuating with time, while anxiety trace is a personality characteristic which remains relatively stable along time.

Lawoko and Soares (2002) stated that when comparing the difference in distress (depression, anxiety, and suicide ideation) among parents of children with CHD, parents of children with other disease, and parents of healthy children, among the mothers of children with CHD were generally having high distress levels compared to the mothers with the other groups. The results showed that 24% of the mothers of children with CHD group reported to have global levels of distress within or above norms for psychiatric patients. CHD severity was shown to have a weak, but positive correlation with scores on depression that is the more severe defect the higher the risk of maternal depression.

Caring for a child with a birth defect can have a negative impact on the physical and mental health of parents and caregivers. Many parents experienced significant depression, fear and anxiety which had a devastating effect on the whole family when left untreated. These feelings are often suppressed due to embarrassment, shame or guilt. Mothers who are often the primary caregivers of the children often feel overwhelmed that they can't manage the issue.

Preoperative care involves the preparation and management of a patient prior to surgery and it is important for the invasive procedures to minimize the complication of the major surgery. It includes both physical and psychological preparation of children and for the parents before surgery. Preoperative teaching meets the parents as well as child need for information regarding surgical experiences which in turn may alleviate fear. Parents who have an opportunity to express their goals and opinions often to reduce their preoperative and post operative anxiety. Instruction about the surgery includes informing the child as well as the parents about what will be done during the surgery and how long the procedure is expected to take.

Role of a nurse in reducing preoperative parental anxiety is to enhance parental knowledge through consistent and repetitive information about child condition either orally or with help of audio visual aids or educational aids like reading materials, which shows to be effective in educating parents about their children condition and medical care. When the nurse detects anxiety in parents, the first task is to identify the cause of the anxiety and to give whatever help is possible to alleviate it.

The preoperative period is accompanied of an emotional overload for the whole family, especially the child. For many children, a turbulent preoperative period may translate into several behaviour changes lasting for long period of time. The presence of parents during anaesthetic induction and the preoperative preparation of children and parents may be useful for selected cases, taking into account age, temperament and previous hospital experience.

Parenting of children with heart defects includes learning about basics like feeding, giving medicines, identifying and watching for signs of trouble, and also involves encouraging children to become involved in their own care. Parents face sometimes daunting task of caring for their child with complex cardio-thoracic surgery. Care provider can help parents with the knowledge and skills to care for their infant during the stressful time which require the concerted effort.

1.2 NEED FOR THE STUDY

Hospitalization of a child can be very stressful experience not only for the child but also for the child care givers. Having a sick child who needs surgery can be extremely stressful. Parents are usually in a state of anxiety and bewilderment when their children are admitted to hospital for surgery. Most of the CHD can be corrected only through surgical management. Impending cardiac surgery is a stressful event that triggers specific emotional, cognitive and physiological responses for the child care givers.

The Indian Journal of Pediatrics (2001) A community based survey of CHD was carried out on a random sample of 11833 children below 15 years in Delhi, India. CHD was diagnosed on clinical history and clinical examination. Out of the examined sample, 50 were found suffering from CHD, giving an overall prevalence of 4.2/1000. The prevalence rate was slightly higher than other studies carried out in the country. The

reason is obvious. The present study is community based while other studies were hospital or school based. The type of lesions in order of frequency were VSD (46%) ASD (18%), PDA (14%)(patent ductus arteriosus) TOF(10%) AS (4%) aortic stenosis and PS (4%). Like other studies ventricular septal defect (VSD) was the commonest lesion. The prevalence rate was higher in the age group in girls with good standards of pediatric cardiac care.

Journal of Advanced Nursing (2002) CHD is now estimated to be the second most prevalent chronic illness. A child chronic illness may have effects that have pervasive consequences for family life. Recently, attention has focused on resiliency variable, especially social support and coping strategy, regulating the impact of stress. In the resiliency model of family stress, adjustment adaptation, social support is viewed as one of the primary moderators or mediators between stress and well being.

International Journal of Environment and Public Health (2013) described 1 in 33 babies currently born with birth defect, and with birth defects being a leading cause of morbidity and mortality in children, there are issues that need to be addressed to help all families be healthier and happier. First, parents need others to be aware of the impact of birth defects. Parents can be extremely helpful in awareness and funding for prevention, but they need to be connected with a common cause. Finally every parent wants their child to reach adulthood and then move on to old age, but because many children, until recently, did not survive to adulthood, the resources to help parents and teens make this transition often not available.

Procedural preparation begins with assessment of the children's and parents current level of understanding and emotional response to the planned procedure. The real, imagined, or potential level, temperament, previous medical experiences, and knowledge information about the experience, family coping patterns, and social support. The severity of cardiac symptoms, although less important than the previously mentioned factors, may affect child and family perceptions of the risk and benefits associated with an invasive cardiac procedure. For example, children who are asymptomatic and their parents may have a difficult time understanding the benefit to be gained by medical intervention. Identification of support systems for children and parents, including spiritual beliefs and practices, is important. Assessment of cultural

background, including health beliefs, culturally specific health care practices, and culturally valued ways of expressing care, is also needed.

Parents of children with birth CHD have additional fear and anxiety in meeting the special demands and care along with normal anxiety in seeing the children. They often feel ill-equipped to care for a child with special needs is affected financially and logistically. A side from the usual uncertainty that new parents face in the postnatal period, parents who have a baby in the newborn intensive care unit (NICU) or with medical interventions are now struggling to learn various nursing skills in addition to general parenting techniques. The parenting advice rarely applies to their child because there are new resources for parents who are dealing with children whose first day home is months after birth, who may have tubes or attachments to their tiny bodies, who suffer from sensory integration issues that none of the normal calming techniques will soothe, and who reach milestones at a tolerate level compared to their to their peers. In fact, so many parents blame themselves for causing their child condition even in the absence of any medical evidence of causation, that the additional feelings of inadequacy stemming from being overwhelmed with their child need can push them deeply into a depression.

Parental participation is essential to the pre procedure process starts with the parental agreement to their child involvement. Children adjustments is the mutual and richly dynamic process of child parent environment. Therefore, outcome of procedure preparation which includes parental concerns, and needs of parents emotion control over their children. Before cardiac procedures, parents express significant levels of psychological stress and reduced coping abilities regarding the heart catheterization or heart surgery is planned. Parents may tell their fears directly or engage in behaviours that appear to communicate anxiety, such as agitation and apology. Parental behaviours that enhance children's coping abilities and to engaging in humorous conversation, talking about topics unrelated to the procedure, and promoting the child use of coping skills.

Parents can provide positive reinforcement in promoting coping strategies, such as supportive role models, and may function as coaches in cognitive behavioural interventions, like relaxation exercises, listening music etc. Thus, engagement of parents in the preparation process is effective and offers practical benefits to reduce the surgical

complications. Interventions aimed at facilitating parental coping and to are anticipate particular importance of younger children to use the limited internal coping strategies.

Anxiety is a normal stressful situation, but heighted parental anxiety may lead to immediate postoperative response in children such as nightmares, separation anxiety, eating disturbance and new onset of enuresis in children. Anxiety of parents can be transmitted to the child and have a long lasting impacts beyond hospital stay. Lack of preoperative preparation will increase parental anxiety and may interfere with ability to support their child.

Healthcare professionals can play an important role in helping families cope with the challenges involved for children who have birth defects. Healthcare professionals should take an extra care to educate families on what to expect when caring for their child and how to manage their child care. With the initial diagnosis, parents are often unable to take in information that may help them. Health care professionals should remember to reiterate what they have told the families over multiple appointments even though it may seem redundant, because parent are often so overwhelmed that they often recall little from the initial consultation. Although specialist visits creates challenges for families, these necessary appointments also allow them to absorb the diagnosis and emotionally prepare for caring for their child. It would be extremely helpful to designate someone to follow up with parents to make sure they are able to cope post-discharge. This person should pay close attention to signs when parents connect with other parents of children with birth defects, they develop a shared social identity which can provide a feeling of hopes as parents see one another successfully coping and as they support one another through the process of raising their children of distress, and have resources avail communication with parents and to help them along their journey from the initial diagnosis to essential educational information and finally to the future needs and issues for that child.

Parents with limited knowledge of care will lead to anxiety, fear and loss of confidence. Mothers are the direct care giver for their children, therefore they should be given proper guidance with regard to the care of CHD so that they could provide and promote optimal health to their child. Inadequate knowledge about surgery is one of the reasons for parental anxiety. Preoperative preparation programs improve parental

knowledge which in turn reduces parental anxiety. Having seen the extent of anxiety in parents and its effects in children during the postoperative period, the researcher felt the need to identify some measures to reduce parental preoperative anxiety.

1.3 STATEMENT OF THE PROBLEM

A study to assess the effectiveness of pre operative orientation programme on post operative anxiety among the mothers of children undergoing cardiac surgery at selected hospital in Chennai.

1.4 OBJECTIVES OF THE STUDY

1 To assess the level of post operative anxiety among the mothers of children undergoing cardiac surgery in the experimental and control group.

2 To compare the effectiveness of pre operative orientation programme on level of postoperative anxiety among the mothers of children undergoing cardiac surgery between experimental and control group.

3 To associate the level of post operative anxiety among mothers of children undergoing cardiac surgery in the experimental group with their selected demographic variables.

1.5 OPERATIONAL DEFINITIONS

1.5.1 Effectiveness:

Refers to the significant difference in the level of anxiety among the mothers of children undergoing cardiac surgery of experimental and control group after receiving preoperative orientation programme.

1.5.2 Pre-operative Orientation Programme

It comprises of group of intervention which includes

1. Information transfer programme
2. Hospital Tour

1. Information Transfer Programme: It is a teaching activity planned and prepared by the investigator to provide information to the mothers of children undergoing cardiac surgery which included the following aspect like meaning, type of cardiac surgery, the guidelines for pre-operative preparation, the hospital policies and

routines and after care and follow up of cardiac surgery. The information transfer was done with the help of power point presentation.

2. Hospital tour: Hospital tour is a orientation programme where the mothers are taken from to all the hospital units involved in surgical procedure from admission till discharge and follow up of the children undergoing cardiac surgery. The areas covered are entrance, car parking, admission department, chapel, ECHO room, pharmacy, canteen, pediatric ward, PICU & OT.

1.5.3 Post Operative Anxiety

Refers to the distress or uneasiness caused by fear of danger or misfortune in mothers of children undergoing cardiac surgery.

1.5.4 Mothers

Refers to the mothers of children between the age group of 0 to 18 years undergoing cardiac surgery

1.5.5 Children undergoing cardiac surgery

Refers to the children between the age group of 0 to 18 years undergoing cardiac surgery which is performed to correct acquired or congenital defect and to replace the diseased valve.

1.6 HYPOTHESES

NH_1: There is no significant difference in the post level of anxiety among the mothers of children between experimental and control group.

NH_2: There is no significant association of level of postoperative anxiety among mothers of children undergoing cardiac surgery in the experimental group with their selected demographic variables.

1.7 ASSUMPTION

1 The mothers of children undergoing cardiac surgery experience high level of post operative anxiety.

2 Mothers of children undergoing cardiac surgery need some measures to reduce anxiety.

3 Mothers with less anxiety can provide better care to the child.

1.8 DELIMITATION

The study was delimited to the period of one month.

1.9 CONCEPTUAL FRAMEWORK

The conceptual frame work designed for this study is based on Jean Watson caring theory. This theory addresses caring relations among humans and deep experiences of life itself. Caring is a universal phenomenon, which is likely to be perceived differently by patients and nurses if they come from different cultural back grounds. A variety of factors impact caring as an act of providing care to patients in any healthcare setting. In Watsons theory nursing is centered on helping the patient and achieve a higher degree of harmony within mind, body, soul and individual, and listening attentively to the patient.

1.9.1 GENERAL CONCEPTS OF JEAN WATSON'S CARING THEORY.

According to Watson (2001), the major elements of her theory are (a) the carative factors, (b) the transpersonal caring relationship and (c) the caring occasion / caring moment.

a. Carative Factors:

Watson views the carative factors as a guide for the core of nursing. She uses the term carative to contrast with conventional medicines' curative factors. Her carative factors attempt to honor the human dimensions of nursing work and the inner life world and subjective experiences of the people we serve.

Carative factors are comprised of 10 elements:

- Humanistic-altruistic system of value
- Faith-Hope
- Sensitivity to self and others
- Helping- trusting, human care relationship
- Expressing positive and negative feelings
- Creative problem-solving caring process
- Transpersonal teaching-learning

- Supportive, protective, corrective mental, physical, societal, and spiritual environment
- Human needs assistance
- Existential-phenomenological-spiritual forces

As she continued to evolve her theory, Watson introduced the concept of clinical caritas processes, which have now replaced her carative factors. The reader will be able to observe a greater spiritual dimension in these new processes. Watson (2001) explained that the word caritas originates from the Greek vocabulary, meaning to cherish and to give special loving attention. The following are Watsons' (2001) translation of the carative factors into clinical caritas process

Caritas processes:

- Practice of loving, kindness and equanimity within context of caring consciousness.
- Cultivation of one's own spiritual practices and transpersonal self, going beyond ego self opening to others with sensitivity and compassion
- Developing and sustaining a helping –trusting, authentic caring relationship.
- Being present to and supportive of the expression of positive and negative feeling as a connection with deeper spirit of and the one being cared for
- Creative use of self and all ways of knowing as part of the caring process to engage in artistry of caring –healing practices
- Engaging in genuine teaching-learning experience that attends to unity of being and meaning, attempting to stay within others framers of reference
- Creating healing environment at all levels, subtle environment of energy and consciousness, where by wholeness, beauty, comfort, dignity and peace are potentiated
- Assisting with basic needs, with an intentional caring consciousness, administering human care essentials which potentiate alignment of mind body spirit wholeness and unity of being in all aspects of care tending to both the embodied spirit and evolving spiritual emergence
- Opening and attending to spiritual mysterious and existential dimensions of one's own life death soul care for self and the one being cared for evolving spiritual.

b. Transpersonal Caring Relationship

The transpersonal caring relationship characterizes a special kind of human care relationship that depends on

- The nurse moral commitment in protecting and enhancing human dignity as well as the deeper/higher self.
- The nurse's caring consciousness communicated to preserve and honor the embodied spirit, therefore, note reducing the person to the moral status of an object.
- The nurse's caring consciousness and connection having the potential to heal since experience, perception, and intentional connection are taking place. This relationship describes how the nurse goes beyond an objective assessment showing concerns towards the person's subjective and deeper meaning regarding their own health care situation.
- The nurse's caring consciousness becomes essentials for the connection and understanding of the other person's perspective. This approach highlights the uniqueness of both the person and the nurse, and also the mutuality between the two individuals, which is fundamental to the relationship. As such, the one caring and the one cared-for, both connect in mutual search for meaning and wholeness, and perhaps for the spiritual transcendence of suffering. The term transpersonal means to go beyond one's own ego and the here and now, as it allows one to reach deeper spiritual connections in promoting the patients comfort healing. Finally the goal of a transpersonal caring relationship corresponds to protecting, enhancing, and preserving the person's dignity, humanity, wholeness and inner harmony.

c. Caring Occasion/Caring Moment

According to Watson (1988b, 1999), a caring occasion is the moment (focal point in space and time) when the nurse and another person come together in such a way that an occasion for human caring is created. Both persons, with their unique phenomenal fields, have the possibility to come together in a human to transaction.

A phenomenal field corresponds to the persons frame of reference or the totality of human experience consisting of feelings, bodily sensations, thoughts, spiritual beliefs, goals, expectations, environmental considerations, and meaning of one's perceptions. All

of which are based upon one's past life history, one's present moment, and one's imagined future, both the one cared for and the one caring can be influenced by the caring moment through the choices and actions decided within the relationship, thereby, influencing and becoming part of their own life history. The caring occasion becomes transpersonal when it allows for the presence of the spirit of both then the event of the moment expands the limits of openness and has the ability to expand human capabilities.

1.10.2 APPLICATION OF MODIFIED JEAN WATSONS HUMAN CARING THEORY FOR THE PRESENT STUDY:

- Caring Occasion/Caring Moment
- Transpersonal Caring Relationship
- Clinical Caritas processes
- Outcome

Caring Occasion/Caring Moment

Here occasion for human caring is created when the nursing researcher (with her unique life history and phenomenal field) and mother of children undergoing cardiac surgery with their unique life history like age of mother, occupation, type of family, number of children, history of consanguineous marriage and phenomenal field like feeling, bodily sensation, thought, expectation (anxiety) etc come together.

Transpersonal Caring Relationship

Nursing researcher goes beyond the objective assessment and concern towards the mothers subjective and deeper meaning regarding their own health care situation. Both the one caring (Nursing Researcher) and the mother connect in mutual search for meaning and establish goals.

The goal of the trans personal relationship is to protect, enhance and preserve personal dignity, humanity, wholeness and inner harmony. Here the nurse researcher and mothers set the goal to reduce anxiety of the mothers and to create awareness about the cardiac surgery to the mothers.

Clinical Caritas processes

Here nursing researcher and the mother engage in genuine teaching learning experience that attempts to unity of being and meaning, attempting to stay with other

frame of reference. The nurse researcher administer pre-operative orientation programme which included information transfer programme (meaning and type of cardiac surgery, guidelines for preoperative preparation, the hospital policies and routine and after care and follow up of cardiac surgery) and hospital tour. The nurse researcher also assess the post operative anxiety level of the mothers by using STAI (State Trait Anxiety Inventory) scale on the 2nd post operative day of surgery.

Outcomes

The level of anxiety is classified as mild, moderate and severe, based on the response of the mother, the mother with mild level of anxiety will be subjected to enhancement and the mother with moderate and severe anxiety will be taken up for reinforcement.

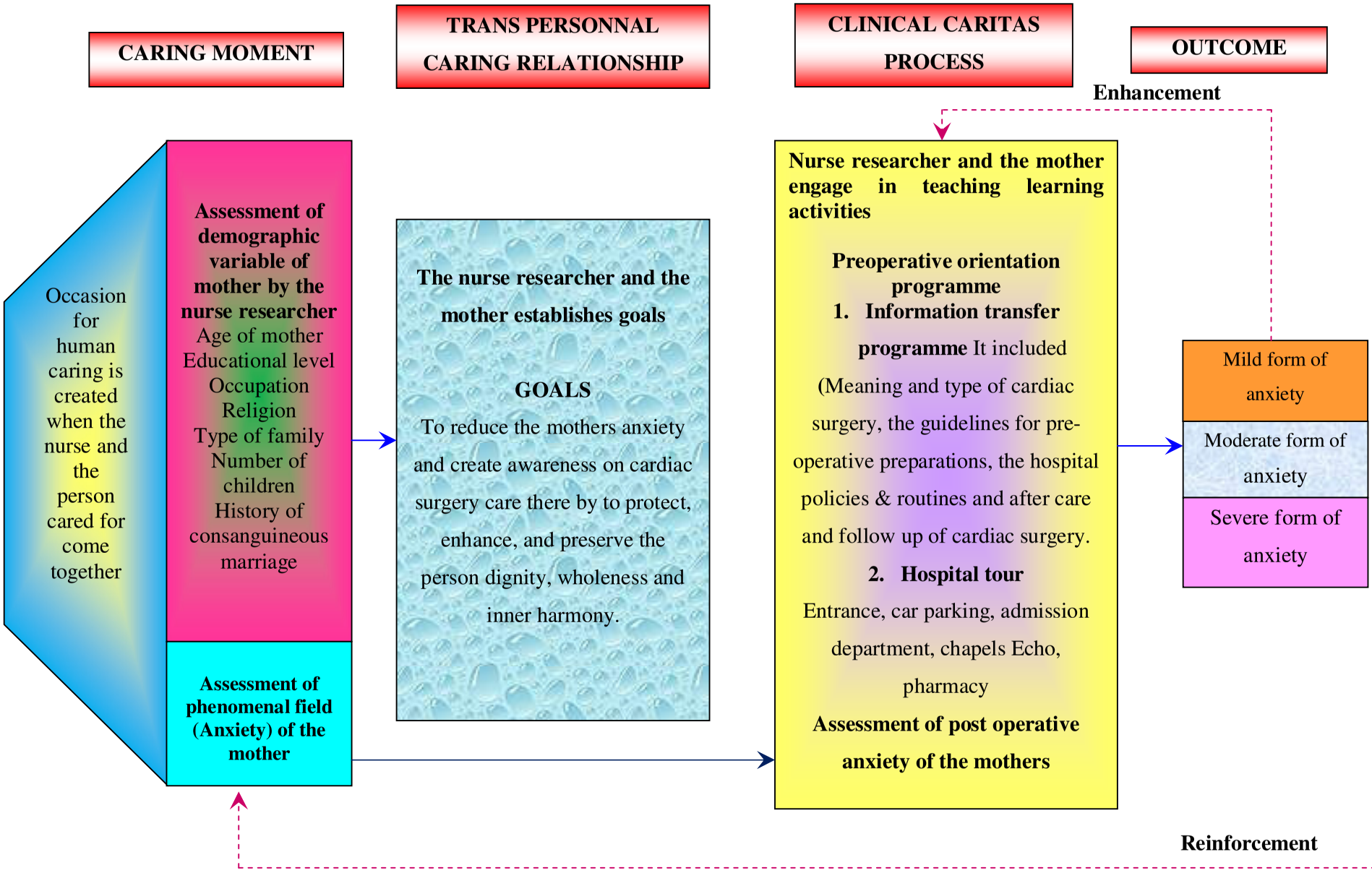

FIG.1.9.1: CONCEPTUAL FRAMEWORK BASED ON MODIFIED JEAN WATSON'S HUMAN CARING THEORY

REVIEW OF LITERATURE

CHAPTER – 2

REVIEW OF LITERATURE

Review of literature is a systematic search of published work to gain information about a research topic. Through the literature review, researcher generates a view about what is known about a particular situation and lays a foundation for the research plan. It provides a background for the current knowledge on the topic and illuminates the significance of the study. The present literature review was based on extensive surveys of journals, books and International nursing studies, a review of literature relevant to the study was undertaken which helped the investigator to develop deep insight into the problem.

2.1 Review related to prevalence of congenital heart disease and its impact
2.2 Reviews related to child cardiac surgery and its impact
2.3 Reviews related to mothers anxiety and effectiveness of pre operative orientation programme

2.1 Review related to prevalence of congenital heart disease and its impact

Branco (2015) conducted a descriptive study to assess the epidemiology of congenital heart disease in Brazil. With the objective of estimating the prevalence of congenital heart disease in Brazil and its subtypes. Data was collected from the literature and the Government registers. The study result showed that incidence rate in Brazil was 25.757 cases per year and also VSD, ASD, PS, TOF were predominant subtype. The study concluded that in Brazil, there is under reporting in the prevalence of congenital heart disease, signaling the need for adjustment in the registration.

Nishio et al (2015) conducted a cross sectional study to identify the echocardiography screening for congenital heart disease in 8819 children. The study aim was to assess the utility of echocardiography screening by measuring the prevalence of congenital heart disease and abnormal finding in children without history of diagnosed CHD. During the period of 2001 to 2013 ECHO examinations was done for 8819 infants and preschool children. Study results revealed that among the 881 children 3175 were infants less than one year (36%), 2292 were one year old (26%), 1058 two year olds

(12%), 794 were three year old (9%) and other children were up to age of six years. Number of 8819 was screened137 children diagnosed with CHD. The study concluded that ECHO screening may be useful for early diagnosis of CHD.

Lee (2015) conducted a study to assess the prognosis and risk factors for congenital airway anomalies (CAA) in children with congenital heart disease. The study aimed to investigate the factors associated with CAA and the associated mortality risk among children with CHD. Population based study noticed 39,652 children between the age group of 0-5 years having CHD between 2000 and 2011 using Insurance Research Data base. Study findings highlighted that mortality risk was increased in children with CHD and CAA and mortality risk also changed by the sex respectively. Study concluded that mortality risk is significantly increased among children with CHD and comorbid CAA.

Aguilar (2015) conducted retrospective study to assess the childhood growth pattern following congenital heart disease. Data were collected from 551 patients with TOF, COA, single ventricle physiology. Weight, height, and body mass index were measured to assess the growth pattern of children. Study result showed that most abnormal patterns were seen in patients with TOF, single ventricle and hypo plastic left heart syndrome. Study concluded that childhood and adolescent's growth patterns were gender and lesion specific.

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Burstrom (2015) conducted a qualitative study to assess the adolescents with congenital heart disease and their parents needs before transfer to adult care. Exploratory design was used and 13 adolescent's parents interviewed. Interview consisted as two categories, adolescents interviews related to change of relationship, knowledge and information, and daily living however looking on the parent's change of relationship and daily living. Overall theme that emerged safety and trust. Finding of the study emphasized that transition must be carefully planned to ensure that adolescents can masters in new skills to manage the transfer to adult cardiologic health care

Mussatto et al (2014) assessed the risk and prevalence of developmental delay (DD) in young children with congenital heart disease. Bayley scales of infant development used to assess the cognitive, language, and motor skills in 99 children with CHD. Study finding concluded that developmental delays in children with CHD are

common. Health care providers should encourage a longitudinal surveillance for children with CHD to reduce the risk of exposure and the prevalence of DD.

Mellion et al (2014) conducted a study to assess the health related quality of life outcomes in children and adolescents with congenital heart disease. Cross sectional design was used in this study. The study aim was to compare the health related quality of life in a group of pediatric patients with congenital heart disease and healthy controls and patients with other chronic disease, and to compare health related quality of life among patients with CHD of various severity categories with one another, with controls, and with patient with other chronic disease. Independent t test was used to compare the patient and reported pediatric quality of life. 1138 and 771 participants are participated in this study. The study concluded that children and adolescents with BV (biventricle) and SV (single ventricle) CHD have significantly lower health related quality of life than healthy controls and similar health related quality of life as patients with other chronic pediatric disease.

Mendieta (2013) conducted a study to identify the incidence of congenital heart disease and factors associated with mortality in children born in two hospitals in the state of Mexico during the period of five years for infants. The analysis of survival was performed with the Kaplan-Meier method, and cox regression was used to estimate the risk of death according to different factors. The overall incidence was 7.4 per 1,000 live birth in preterm 35.6 per 1,000 and term newborns and it was 3.68 per 1,000.Study concluded that, common heart disease was the ductus arteriosus in the overall group .preterm and term newborns mostly affected ASD

Rama Kumara (2013) conducted a study to estimate the prevalence of rheumatic and congenital heart disease in school children of Andhra Pradesh, south India. Echocardiography screening was done to diagnose the CHD and RHD among 4213 school children between the age of 5 and 16 yrs. Clinically, few students were identified both problem. Urban and rural school students participated in this study. The study finding revealed that 53 students diagnosed as RHD and 44 students diagnosed as CHD with the use of ECHO

Zhu et al (2013) conducted a registry based study to examine the prenatal maternal bereavement and congenital heart defects in offspring. The objective to assess the maternal emotional stress during cardiogenesis may be a risk factor for congenital heart defects. Study was conducted in the period of January 1-1-1978 to31-12-2008. 1,770,878 singletons born in Denmark during period, in these 44820 mothers of children lost the first degree relatives during the time period from one year before their last menstrual period until the delivery. Finding of the study emphasized that exposed children had a slightly higher prevalence of CHD than unexposed children.

2.2 Reviews related to child cardiac surgery and its impact

Desena (2015) conducted a study to assess the cardiac intensive care for the neonate and child after cardiac surgery. The purpose of the study was to focus on postoperative care in the pediatric patient with congenital heart disease to identify the relation between length of stay and morbidity. The study finding revealed that prolongation of the length of stay following a cardiac surgery contributes to morbidity. Post operative feeding difficulty, hyperglycemia, acute kidney injury, fluid overload, and prolonged intubation contribute significantly to length of stay.

Turcotte et al (2014) conducted a study to determine health care associated infections in children after cardiac surgery. A retrospective cohort to assess the epidemiology of several types of health care associated infections (HAIs) in the pediatric population after cardiac surgery was done. Sample comprised of 634 children's between the age group of 18 years and younger undergoing cardiac surgery. Multivariable analysis using poisson regression model was used to analyze the risk factor of cardiac surgery. The study concluded that HAIs occurred after 6% of cardiac surgeries. Bacteremia and CLABSI were the most common.

Belliveau (2012) conducted a study to investigate the real time complications monitoring in pediatric cardiac surgery. Background of the study identified the overall mortality rates have fallen in pediatric cardiac surgical procedures. Currently there is no standardized method available to monitor severity adjusted complications in congenital cardiac surgical procedures. Study was conducted during the period of 2009 to 2011. Study result concluded that 181 index surgical procedures performed in 178 patients, 217 complications occurred in 80 procedures. Frequency and severity of complications

increase with surgical complicity. It is concluded that observe minus expected (OE) plots providers a simple and effective system to monitor complications rates over time base on severity adjusted complication data.

Vijamsom et al (2012) conducted a retrospective study to assess the postoperative fever and major infections after cardiac surgery. Study aim was to explore the current status of major infections and other etiologies of postoperative fever from pediatric cardiac surgery determine the risk factors of major infection. Study result showed that 230 patients developed fever .The study concluded that pediatric cardiac surgery major infections are still problematic .The risk increase with infancy, prolonged ventilator support and prolonged hospital stay.

Santiago (2012) conducted a prospective observational study to assess the evolution and mortality risk factors in children with continuous renal replacement therapy after cardiac surgery. Sample consisted of 1650 children. Study result showed that 81 children needed continuous renal replacement therapy. Study concluded that small percentage of children undergoing cardiac surgery required continuous renal replacement therapy.

Costello et al (2010) conducted a matched case-control study to evaluate the risk factors for surgical site infection (SSI) after cardiac surgery in children. Identified two randomly selected groups of patients who underwent cardiac surgery within 7 days. The sample comprised of 72 SSI and 144 controls were included. Univariate and multivariate conditional logistic regression analysis were used to identify risk factors for surgical site infection. The study concluded that younger patients undergoing longer surgical procedures and those requiring more postoperative blood transfusions are at greatest risk for SSI.

Nieminen HP (2007) conducted a population based study to assess the causes of late deaths after pediatric cardiac surgery. The data was collected about the late death of patients operated on for CHD in Finland during the years 1953 to 1989. The study concluded that survival of patients was lower than that of the children with other surgical intervention.

Huth (2003) conducted on experimental study to assess the effectiveness of a pain management education booklet for parents of children having cardiac surgery. All Parents need education about pain so they can support their hospitalized child and manage their child pain at home. Study aim to explore the effectiveness of a pain booklet on parental pain support to children experiencing postoperative pain. Study group received pain management education booklets. On the other hand control group received standard care. Study findings revealed that children reported moderate level of pain post operatively. Parents who were exposed to the pain assessment and management for parent's education booklets preoperatively increased their knowledge and where as control group remained stable.

2.3 Reviews related to mothers anxiety and effectiveness of pre operative orientation programme

Kalogiann et al (2015) conducted an experimental study to analyse whether a nurse –led preoperative education can reduce anxiety and postoperative complications of patient undergoing cardiac surgery. Study aim to assess the effectiveness of a nurse –led preoperative education on anxiety and post operative outcomes. Study consisted of intervention group and control group. Intervention group received preoperative education by specially trained nurse and control group received standard information by the ward personnel. The measurement of anxiety was done at 3 stages, on admission, before surgery and before discharge through state trait anxiety inventory. The sample consisted of 395 patients, intervention group 295 and control group 190.The study concluded that preoperative education delivered by nurse reduced anxiety and post operative complications of patients undergoing cardiac surgery, but it was no effective in reducing readmission or length of stay.

Ortiz (2015) conducted a review which emphasized the preoperative patient education to improve satisfaction and reduce anxiety. The back ground of the study emphasized on patients knowledge deficits concerning anesthesia and the anesthesiologist role in their care which contribute to anxiety. Study aimed to develop anesthesia patient education materials regarding anesthesia that would help improve patient satisfaction regarding the preoperative process and decrease anxiety. Survey method was used to collect the data and hand outs were provided for the study group. Study result revealed that patients who received the handout showed, statistically

significant improvement in the question that asked about satisfaction with regard to understand in the type of anesthesia but there was no difference in anxiety related to surgery in patients who received the education with handout compared to those patients who did not. The study concluded that patient education handouts improve patients satisfaction regarding their knowledge of the preoperative process but did not reduce anxiety related to surgery

Guo et al (2015) conducted a study to assess the pre-operative education interventions to reduce anxiety and improve recovery among cardiac surgery patients. Back ground of the study emphasized that patients awaiting cardiac surgery may experience high level of anxiety and depression, which can severely affect their existing disease and surgery and result in prolonged recovery. Finding of the study concluded that importance of the effectiveness of preoperative education interventions among cardiac surgery patients remains inconclusive.

Staveski et al (2015) conducted a study to assess the effectiveness of parent education discharge instruction programme (PEDI) of children with complex cardiac defects where a pre-test post test design was used. A total number of 40 nurses and 20 parents were taken for this study. Discharge knowledge was increased from a mean of 81% to 96% and parents reported high level of satisfaction with the educational material.

Obas (2015) conducted a descriptive study to assess the parental perceptions of transition from intensive care following child care. Study aimed to explore parents perceptions of the transition from the PICU to the surgical ward following their child cardiac surgery. Interview method was used to collect the information from participants. Study findings revealed that parents described mixed feeling of happiness and uncertainty upon learning that their child would be transferred to surgical ward. Study findings concluded that parents identified key nursing interventions that helped them to prepare for transfer and come in terms with challenges in their new environment

Paramo-Rodriguez et al (2015) conducted a qualitative study to assess the experiences of mothers and fathers of children with congenital heart disease at the time of diagnosis, including the opinions of medical staff taking care of these children and their families. Purposive sampling technique was adopted for this study. Interview

method was used to collect the data from mothers and fathers living in Spain. The study finding concluded that mothers and fathers in the way they expressed their emotions and in how they accepted the diagnosis of a serious illness in their child. However, both parents expressed the need for psychological support and highly appreciated the informal support from other parents with similar experiences.

Hearps et al (2014) conducted a study to assess the psychosocial risk in families of infants undergoing surgery for a serious congenital heart disease. Sample comprised of 39 care givers (28 mothers) of 29 children diagnosed with infants undergoing surgery for a congenital heart disease and requiring surgery within the first 4 weeks of life. Psychosocial risk was measured using the psychosocial assessment tool .Parents psychosocial risk was measured within 4 weeks after their Childs surgery. The study concluded that, majority of parents adapt to the acute stress of surgery for a serious cardiac illness in their infant, the remaining 38.5% reported an increased psychosocial risk in parents of children undergoing surgery for a congenital heart disease.

Harvey (2013) conducted a study to assess the experiences of mothers of infants with congenital heart disease before, during and after cardiac surgery. Back ground of the study emphasized on congenital heart disease is the most frequent birth defect in the United States and common in world wide the collected data from 8 mothers were analysed with colaizzis phenomenological method. Study concluded that through a clearer understanding of experience as described by mothers health care providers may gain insight as to how better support mothers of infants undergoing cardiac surgery.

Dean & Menahem (2013) conducted a qualitative study to assess the mothers of infants undergoing cardiac surgery of therapeutic experience. Back ground of the study emphasized that serious congenital heart disease requires major congenital heart surgery. Sample size consisted of 26 mothers of two month old infants. The study findings revealed that the all participants were at acute stress symptoms relating to the diagnosis. Mothers reported that the interview helped them to think about and to integrate what had happened to them and their infant.

Brien (2013) conducted a study to evaluate the Pre –surgery education for elective cardiac surgery patients. The objective of the study was to identify the cardiac

surgery patient's perception and the effectiveness of post operative verbal education provided by occupational therapy. A cross sectional survey design was carried out with sample size of 375 who had undergone cardiac surgery. The study findings revealed that pre surgery education appears to patients with a good understanding of what to expect following surgery.

Guo & East L (2012) evaluated the effectiveness of preoperative intervention to reduce anxiety and improve recovery among Chinese cardiac patients. The objective of the study was to determine whether a preoperative education intervention designed for Chinese patients can reduce anxiety and improve recovery. Study was conducted in cardiac surgical wards of two public hospitals in Luoyang, China. Randomized control trial was carry out with sample size of 153 adult patients undergoing cardiac surgery. 77 samples were allocated to a usual care control group and 76 were to preoperative education group who received care plus an information leaflet and verbal advice. Measurement was conducted before randomization and at seven days following surgery. A primary outcome was change in anxiety measured by the hospital anxiety and depression scale. Secondary outcome were change in depression, change in pain as measured by subscales of the brief pain inventory. The study concluded that form of preoperative education is effective in reducing anxiety

Zhang (2012) conducted a study to assess the impact of preoperative education on postoperative anxiety symptoms and complications after coronary artery bypass grafting. A prospective and randomized trial design was carried out with a sample of 40 patients who were divided into the study and control group. Anxiety symptoms were assessed by Zung's self –rating anxiety scale on the day of admission and 3 days after the surgery. The result of the study was stated that there is no statistically significant difference in the baseline characteristics or operational data between the two groups. The finding revealed that nurse initiated preoperational education and counseling were associated with a reduced rate of pre operative complications and a reduced level of anxiety in CABG

Salgado (2011) conducted a study to assess the pediatric cardiac surgery under the parents sight. Congenital heart defects can often be corrected through surgery providing for parents to expect a normal life, but the hospitalization experience often early, cause more pain, for which surgery is the worst moment .Study aim to explore and

analyse the experience of families of children undergoing cardiac surgery and to identify the coping resources used by the families. Qualitative approach was used in this study. The study finding revealed that experiences of families was characterized by ambivalent feeling such as fear of death, guilt and helplessness against the different stages of treatment

Landolt (2011) conducted a prospective study to assess the predictors of parental quality of life after child open heart surgery. Study aimed to explore the parental heath related quality of life and its predictors after child open heart surgery. Sample size was 138 parents. Finding explored that parents mental health related quality of life is low in the immediate period after their child open heart surgery but normalizesd after 6 months.

Hoehn (2004) conducted a study to assess the parental decision making in congenital heart disease. Study aim to explore whether prenatal diagnosis of congenital heart disease is associated with lower levels of parental distress and greater satisfaction with decision about cardiac surgery. Sample sizes were investigated between the period of November 2001 to May 2002 among parents of 31 neonates. Interview method was used to assess the satisfaction level of parents. Study findings revealed that at the time of surgery mothers of neonates receiving the diagnosis prenatally on measures of anxiety, optimism, and life events.

Tromp (2004) conducted a study to explore the interdisciplinary preoperative patient education in cardiac surgery. Sample comprised of 107 patients and educators dialogues videotaped at the preoperative clinic on the day of admission and were analysed using a checklist of 123 specific topics. The study concluded that implementation of the information protocol led to a better interdisciplinary division of labour. Inconsistencies gaps and overlaps in information provision can be avoided by the unambiguous delineation of responsibilities and tasks in information provision by different health care providers.

Chan et al (2002) conducted a study to assess the effectiveness of an educational programme on the anxiety and satisfaction level of parents having parent present induction and visitation in a post anesthesia care unit. A quasi experimental pre-test and post test design was used. A total number of 50 parents participated in this study,

educational programme was given to experimental group. Trait anxiety and the parental satisfaction with care was assessed .Questionnaire was used to assess parents anxiety and satisfaction with care. The result showed that parents who received an educational programme reported a decrease in anxiety and increase in their satisfaction with the care provided. The study suggested that an education programme helping the parents to reduce the anxiety level and increased satisfaction with care.

Geggel (2002) conducted a study to assess the parental anxiety with the referral pediatric cardiologist for evaluation of a stills murmur. The objective of the study was to identify the factors contributing to parental anxiety when children are referred to a cardiology clinic. Study findings revealed that parent anxiety was about multiple issues including need for medication, sports restriction, cardiac surgery, etc. Study concluded that parental anxiety is common among parents of children referred for specialty evaluation.

Utens (2000) conducted a study to assess the psychological distress and styles of coping in parents of children awaiting elective cardiac surgery. Data collection was completed four weeks prior to elective cardiac surgery or elective catheter intervention. Psychological distress and style of coping were assessed by using a general questionnaire, and Utrecht coping list. Sample comprised of 143 parents divided into experimental s group and control group. The study finding revealed that elevated levels of psychological distress and less adequate styles of coping among the parents of patients about to undergo cardiac surgery, especially the mothers, when compared to reference groups.

Nelson (1996) conducted a exploratory pilot study to examine pre –admission education for patients undergoing cardiac surgery. The aim of the study was to identify whether the patients fears and anxieties will be reduced by the provision or pre – operative information before admission for surgery. Sample comprised 0f 40 & which 20 to each group & control was allocated. First group received the pre admission education programme and the second group had received information from the ward staff on admission. The study concluded that 100% of the patients felt that they benefited from the pre-admission programme and 76% felt that their anxieties had been relieved.

METHODOLOGY

CHAPTER – 3

RESEARCH METHODOLOGY

Research methodology is the systematic way of doing a research to solve a problem. The phase of the study includes research design, variables, setting, population, sample, sample size, criteria for sample section, sampling technique, description of the tool, content validity and reliability of the tool, pilot study, data collection and plan for data analysis. On the whole it gives a general pattern of gathering and processing the research data.

3.1 RESEARCH APPROACH

Research approaches are the plans and the procedures for research that plan the steps from broad assumptions to detailed methods of data collection, analysis, and interpretation. In the present study, a quantitative approach was used.

3.2 RESEARCH DESIGN

The research design is a blue print for conducting the study and it guides the researcher in planning and implementing the study in a way that is most likely to achieve the intended goal.

Research design used for the present study was true experimental post test only design.

GROUP	INTERVENTION	POST TEST
Experimental group	×	O_1
Control	—	O_1

× – Administration of Preoperative orientation programme.

O_1 – Post test assessment of level of anxiety by STAI scale

3.3 VARIABLES

3.3.1Independent Variables:

Pre operative orientation programme.

3.3.2 Dependent Variable:

Level of post operative anxiety among the mothers of children undergoing cardiac surgery.

3.4 RESEARCH SETTING

The study was conducted in Madras Medical Mission Hospital Mogappair Chennai, which is a cardiac speciality hospital with 283 beds with nearly 75 critical care beds to provide comprehensive care to patients with cardiac disorders. The Present study was conducted in pediatric general ward which is in second floor of the Hospital.

3.5 POPULATION

3.5.1 Target Population

All the mothers of children undergoing cardiac surgery in Tamil Nadu.

3.5.2 Accessible Population

All the mothers of children undergoing cardiac surgery at MMM Hospital.

3.6 SAMPLE

The sample consists of mothers of children undergoing cardiac surgery and who fulfilled the sample selection criteria.

3.7 SAMPLE SIZE

Sample size comprised of 50 mothers of children undergoing cardiac surgery and randomly assigned 25 to each experimental group and control group

3.8 SAMPLE TECHNIQUE

Simple random sampling technique was used by the researcher to select the samples.

3.9 CRITERIA FOR SAMPLE SELECTION

3.9.1 Inclusion Criteria

1. Mothers of children between the age group of 0 to 18 years and undergoing cardiac surgery
2. Mothers who were able to read and understand Tamil, Malayalam, and English
3. The mothers who were willing to participate in this study.

3.9.2 Exclusion Criteria

1. The mothers of children who were undergoing emergency cardiac surgery
2. The mothers of children who were undergoing other than cardiac surgery
3. Mothers of children who are critically ill.

3.10 DEVELOPMENT AND DESCRIPTION OF THE TOOL

An extensive literature review and discussion with the experts and the investigators own professional experience helped the investigator in the development of tool for data collection.

The instrument envisaged for use in this study was divided into two parts

3.10.1 Part 1 - Assessment of socio demographic data which consisted of age of mother, educational level, occupation, religion, type of family, number of children, and history of consanguineous marriage.

Part 2 - STAI which is a standardized tool to assess the state as well as trait anxiety level was used to assess the post operative anxiety of mothers of children undergoing cardiac surgery. The state trait anxiety inventory tool consisted of 40 items, 20 item for each State-anxiety and Trait anxiety subscales. The state anxiety scale assesses the intensity of current feeling at this moment and the trait anxiety scale assesses frequency of feelings in general. The score range from 20 to 80 for both state and trait anxiety subscales. The higher the score indicate greater anxiety, low score indicate mild anxiety, were as median score indicate moderate anxiety.

Both state and trait anxiety subscales had anxiety present and anxiety absent questions. Each item was rated on 4 point scale. The 4 point subscale for S-anxiety

subscale is as follows 1-Not at all, 2-Some what, 3-Moderately so and 4-Verymuch so.
In the state anxiety subscale, anxiety present question were scored as

Not at all - 1

Some what - 2

Moderately so - 3

Very much so - 4

In the same subscale the anxiety absent question were scored as

Not at all - 4

Some what - 3

Moderately so - 2

Very much so - 1

The 4 point scale for T- anxiety subscale is follows 1-Almosr never, 2-Sometimes, 3-Often and 4-Almost always

In the trait anxiety subscale the anxiety present questions were scored as

Almost never - 1

Sometimes - 2

Often - 3

Almost always - 4

In the same subscale the anxiety absent question were scored as.

Almost never - 4

Sometimes -3

Often - 2

Almost always -1

The total score was interpreted as follows

20-40: mild anxiety

41-60: moderate anxiety

61-80: severe anxiety

3.11 CONTENT VALIDATION OF THE TOOL

The tool was validated by two medical experts in the field of pediatric cardiology and three nursing experts specialized in pediatric nursing. Minor modifications were

made in the tool based on expert opinions and the suggestions were incorporated in the tool and was finalized for the main study.

3.12 ETHICAL CONSIDERATION

Ethics is a system of moral values that is concerned with the degree to which the research procedures adhere to the professional, legal and social obligations to the study participants.

Ethical Principle	Action Carried out
Principle of beneficence	Information transfer teaching programme was done with power point presentation to create awareness about the cardiac surgery and its care and the anxiety was reduced. Hospital tour was done to the mothers to give orientation for all units involved in the surgical procedure. The mothers benefited out of teaching and hospital tour.
Principle of respect for human dignity	Those who were willing to participate were selected as samples for the study and right to withdraw was ensured before data collection. They were given privacy
Principle of confidentiality	The information regarding the samples and their performance were kept confidential.
Principle of informed consent	Informed consent was obtained from all the samples selected for the study.

3.13 PILOT STUDY

The pilot study was conducted after obtaining ethical committee clearance from the Madras Medical Mission Hospital and permission to conduct study from the head of the department of pediatric cardiology. The data was collected from the mothers of children undergoing cardiac surgery. The sample were selected based on the sample selection criteria. The sample size was 5 to each experimental and control group totally 10. The samples were selected by using simple random sampling techniques. Brief

introduction about the self and study was given to the samples. The mothers of experimental group were given pre operative orientation programme where they were given information transfer teaching programme by using PPT for 30 minutes and after that they were taken for Hospital tour which took nearly 30 minutes on the previous day of surgery. The level of post operative anxiety of the mothers were assessed on the second post operative day of the surgery using STAI, which took 10-20 minutes to complete. For the mothers of control group the same steps carried out expect the intervention (pre-operative orientation programme. The collected data was tabulated and organized for analysis.

3.14 RELIABILITY

The reliability of the STAI tool was assessed by the test–retest method. The Correlation Coefficient was computed using Karl Pearson correlation.

The reliability r' was estimated using the formula r'=2r/1+r and the estimated reliability value for state trait anxiety inventory tool was r=0.86

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3.15 DATA COLLECTION PROCEDURE

The data collection for the main study was done after obtaining ethical clearance from the study setting and permission to conduct study from the head of the department of pediatric cardiology. The data was collected from the mothers of children undergoing cardiac surgery. The sample were selected based on the sample selection criteria. The sample size was 25 to each experimental and control group. Sample were selected using simple random sampling techniques. Brief introduction about the self and study was given to the samples. The mothers of experimental group were given pre operative orientation programme where they were given information transfer teaching programme by using PPT for 30 minutes and after that they were taken for Hospital tour which took nearly 30 minutes on the previous day of surgery. The level of post operative anxiety of the mothers were assessed on the second post operative day of the surgery using STAI, which took 10-20 minutes to complete. The level of post operative anxiety of the mothers were assessed on the second post operative day of the surgery using STAI, which took 10-20 minutes to complete. For the mothers of control group the same steps carried out expect the intervention (pre-operative orientation programme). The collected data was tabulated and organized for analysis.

Stages of data collection	Activity done	Time and duration
stage1	Selection of the sample based on the sample selection criteria	It took nearly 3 minutes to complete the task
Stage 2	Preoperative orientation programme which includes Information transfer programme & Hospital tour	It took nearly 30 mts to complete each session for each mother
Stage 3	Post test assessment of level of post operative anxiety was done by using STAI-Scale on the 2nd post operative day.	Mothers took 10 minutes to complete the task

Fig.3.15.1: Schematic Representation of Data Collection Procedure

3.16 DATA ANALYSIS PROCEDURE

Data collected was analyzed using both descriptive and inferential statistics.

3.16.1 Descriptive Statistics

1. Analyses of sample characteristics such as socio-demographic data were analysed using frequency and percentage.
2. Mean and Standard deviation was used to assess the level of post operative anxiety among mothers.

3.16.2 Inferential Statistics

1. Independent t test was used to compare the level of post operative anxiety among the mothers of children undergoing cardiac surgery.
2. Chi-square test was used to associate the post operative state and trait anxiety among the mothers of children undergoing cardiac surgery in the experimental group with their selected demographic variable.

DATA ANALYSIS AND INTERPRETATION

CHAPTER – 4

DATA ANALYSIS AND INTERPRETATION

It is a systematic organization and synthesis of research data in order to answer the research question and test hypothesis. Interpretation is the process of making sense of study results and of examining their implications. The data findings have been analyzed and tabulated according to the plan for data analysis and are interpreted under the following headings.

ORGANIZATION OF THE DATA

Section A: Description of demographic variables of the mothers of children undergoing cardiac surgery in the experimental and control group.

Section B: Assessment of post operative anxiety among mothers of children undergoing cardiac surgery in the experimental and control group.

Section C: Assessment of effectiveness of pre operative orientation program on level of post operative anxiety among mothers of children undergoing cardiac surgery between experimental and control group.

Section E: Assessment of association of post operative anxiety among mothers of children undergoing cardiac surgery in the experimental group with their selected demographic variables.

SECTION A: DESCRIPTION OF DEMOGRAPHIC VARIABLES OF THE MOTHERS OF CHILDREN UNDERGOING CARDIAC SURGERY IN THE EXPERIMENTAL AND CONTROL GROUP.

Table 4.1: Frequency and percentage distribution of demographic variables of the mothers of children undergoing cardiac surgery in the experimental and control group.

N=50

Demographic Variables		Groups				Chi square Test
		Experimental		Control		
		No.	%	No.	%	
Age of mother	18-25	8	32.0	2	8	χ^2=5.34 P=0.15 df=3 NS
	26-32	9	36	12	48	
	33-40	6	24	6	24	
	> 40	2	8	5	20	
Educational Level	Primary	4	16	9	36	χ^2=7.42 P=0.07 df=4 NS
	Secondary	6	24	5	20	
	Higher secondary	4	16	3	12	
	Graduate	11	44	4	16	
	Post graduate	0	0	4	16	
Occupation	Employed	4	16	2	8	χ^2=0.75 P=0.40 df=1 NS
	Unemployed	21	84	23	92	
Religion	Hindu	11	44	18	72	χ^2=4.16 P=0.13 df=2 NS
	Christian	11	44	6	24	
	Muslim	3	12	1	4	
Type of family	Nuclear	18	72	20	80	χ^2=0.439 P=0.60 df=1
	Joint	7	28	5	20	
Number of children	One	0	0	4	16	χ^2=6.11 P=0.106 df=3 NS
	Two	19	76	17	68	
	Three	4	16	1	4	
	Above 3	2	8	3	12	
History of consanguineous marriage	Yes	3	12	8	32	χ^2=2.91 P=0.09 df=1 NS
	No	22	88	17	68	

P<0.05 Statistically significant.

The above table depicts the frequency and percentage distribution of demographic variables of the mothers of children undergoing cardiac surgery in experimental and control group.

With respect to the age, 9(36%) of them were in the age group of 26-32 years and 8(32%) of them were in the age group of 18-25 years, 6(24%) of them were in the age group33-40 years and 2(8%) of them were above 40 years in the experimental group. Similarly in control group 12(48%) of them were in the age group of 26-32 years, 2(8%) of them were in the age group of 18-25 years, 5(20%) of them were above 40 years and 6(24%) mothers were in the age group o f 33-40.

With regards to the education, 11(44%) of them had under graduate education, 6(24%) had secondary education and an equal percentage of the them4 (16%) had primary and higher secondary level of education in experimental group .Similarly in control group, 9(36%) mothers had under primary education, 5(20%) of them had secondary education and an equal percentage of the mothers 4 (16 %) had graduate and post graduation level of education and 3(12%) of them had undergone education up to higher secondary.

With respect their occupation status, 21(84%) were unemployed and rest of them 4(16%) were employed in experimental group. Similarly in control group 23(92%) were unemployed and rest of them (2) were employed.

Regarding the religious background, 11 (44%) of the mothers belongs to Hindu and Christian religion and rest of them 3(12%) were Muslims in experimental group, similarly in control group 18(72%) of the mothers were belongs to Hindu religion, followed by Christian 6(24%) and Muslim 1(4%).

With respect to family size, 18(72%) were in nuclear family and 7(28) were belongs to joint family in experimental group. Similarly in control group 20(80%) were in nuclear family and only 5(20%) were in joint family.

When considering number of children in the experimental group, none of them had one children, 19 (76%) of them had two children, 4(16%) of them had 3 children and 2(8%) of them had more than 3 children. Similarly in the control group 17(68%) of them had two children 4(16%) of them had one child, 1(4%) of them had 3 children and 3(12%) of them had more than 3 children.

Considering the type of marriage, 22(88%) mothers had non consanguineous marriage and rest of them 3(12%) had consanguineous marriage in experimental group .Similarly in control group 17(68%) had non consanguineous marriage and rest of them 8(32%) had consanguineous marriage.

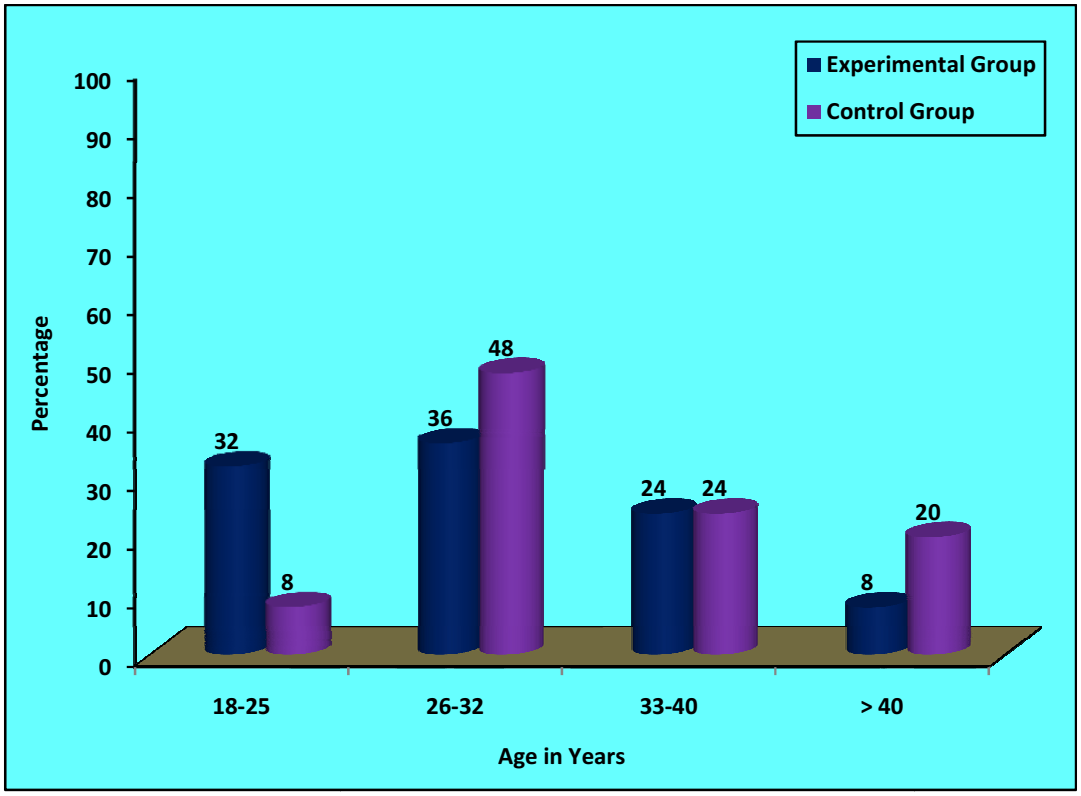

Fig.4.1: Percentage distribution of age of mothers of children undergoing cardiac surgery in the experimental and control group

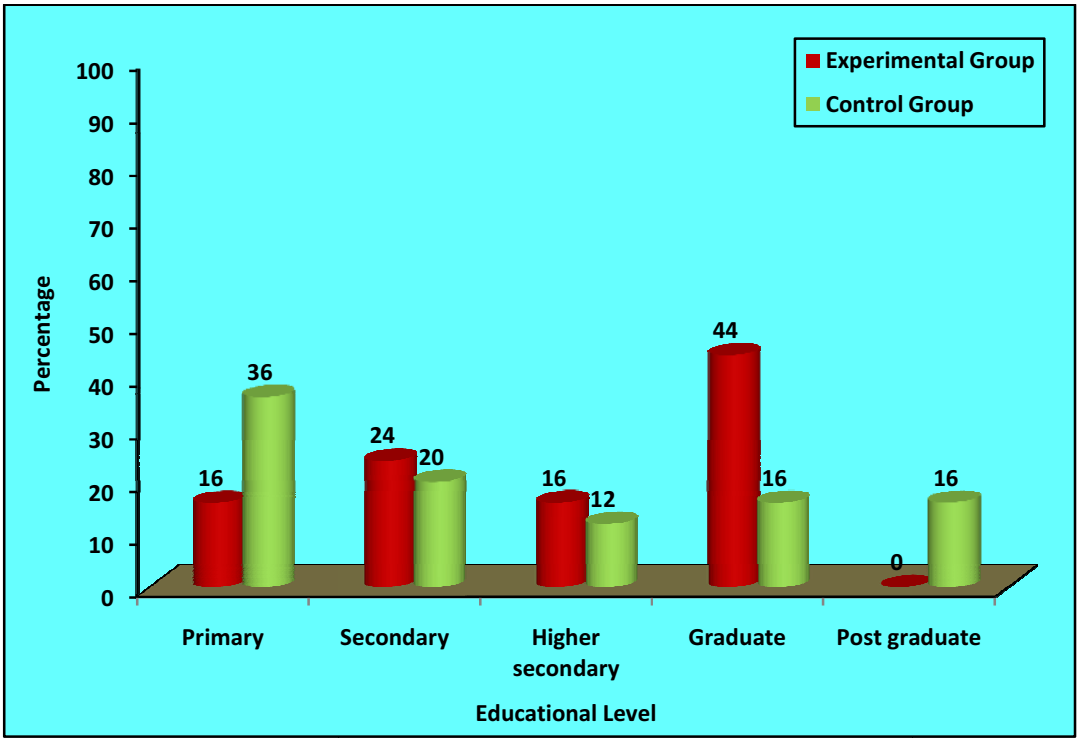

Fig.4.2: Percentage distribution of educational status of mothers of children undergoing cardiac surgery in the experimental and control group

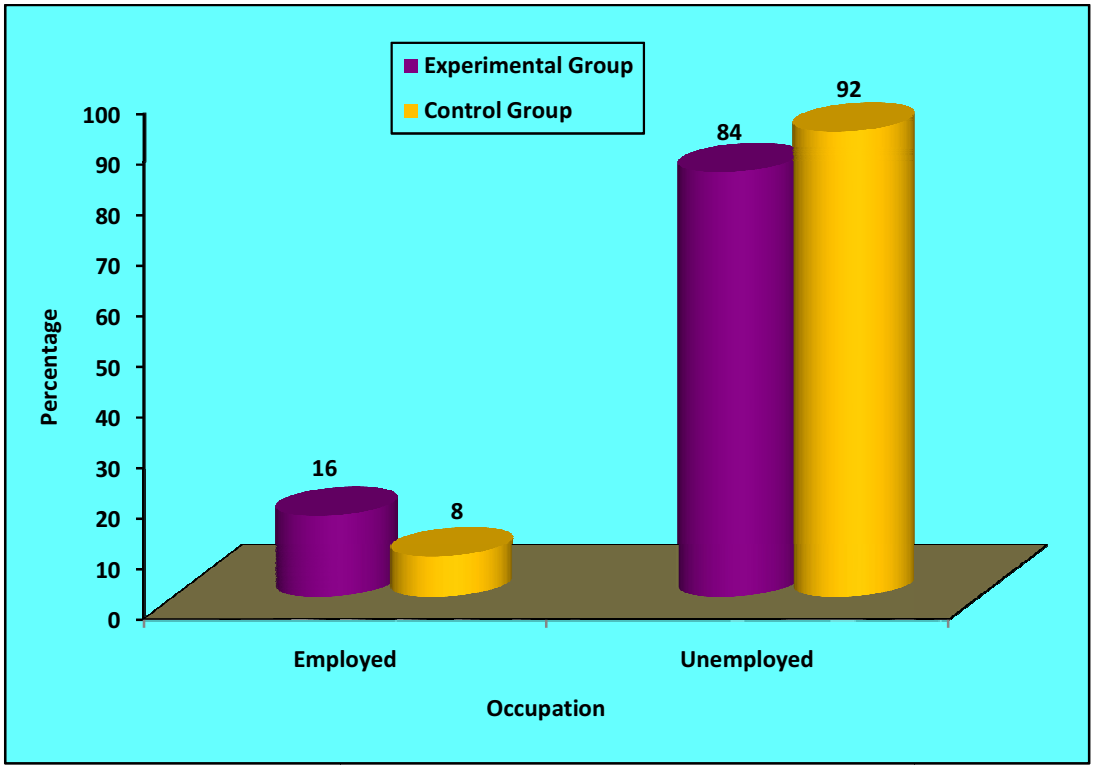

Fig.4. 3: Percentage distribution of occupational status of mothers of children undergoing cardiac surgery in the experimental and control group

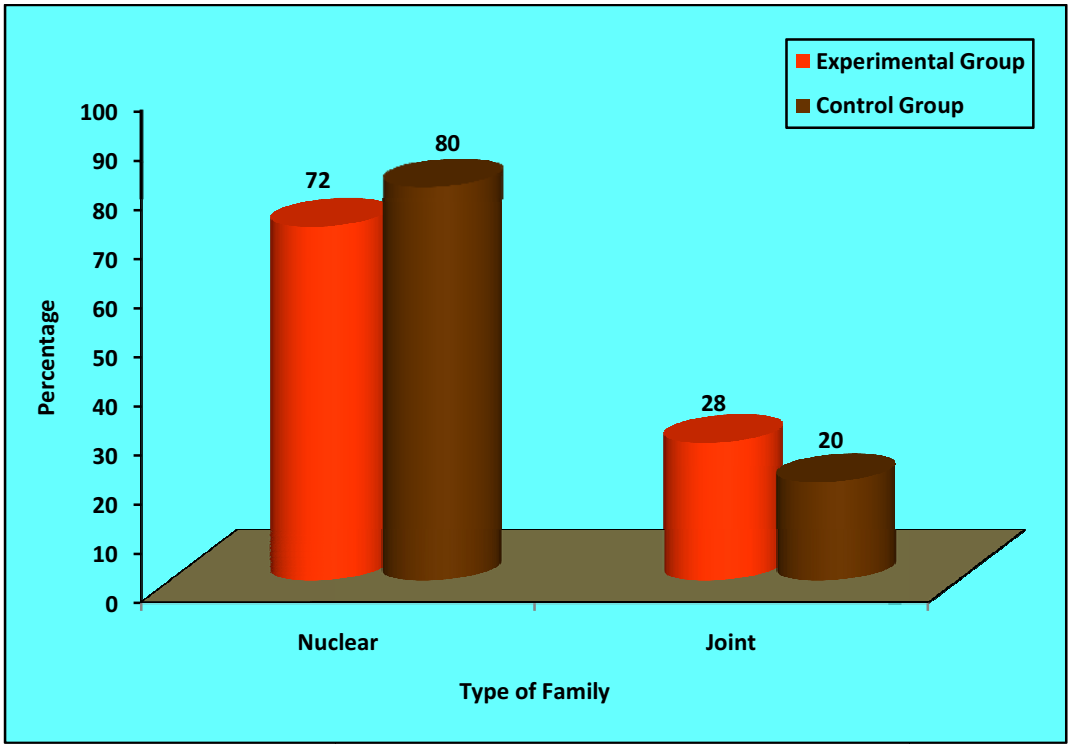

Fig.4. 4: Percentage distribution of type of family of mothers of children undergoing cardiac surgery in the experimental and control group

SECTION B: ASSESSMENT OF POST OPERATIVE ANXIETY AMONG MOTHERS OF CHILDREN UNDERGOING CARDIAC SURGERY IN THE EXPERIMENTAL AND CONTROL GROUP

Table 4.2: Frequency and percentage distribution of level of post operative state anxiety among the mothers of children undergoing cardiac surgery in the experimental and control group

N=50

GROUP	Mild (20-40)		Moderate (40-60)		Severe (60-80)		Total	
	No.	%	No.	%	No.	%	No.	%
Experimental	7	28	18	72	0	0	25	50
Control	0	0	24	96	1	4	25	50

The above table 4.2 shows the frequency and percentage distribution of level of post operative state anxiety among mothers undergoing cardiac surgery in the experimental and control group. With regards to level of state anxiety in experimental group, 18(72%) had moderate anxiety, 7(28%) had only mild level anxiety and none of them had severe anxiety and considering the level of anxiety in control group, majority 24(96%) had moderate anxiety and 1 (4%) had severe anxiety.

The above findings indicated that experimental group had mild to moderate anxiety. Whereas in control group, moderate anxiety and severe form of anxiety was found.

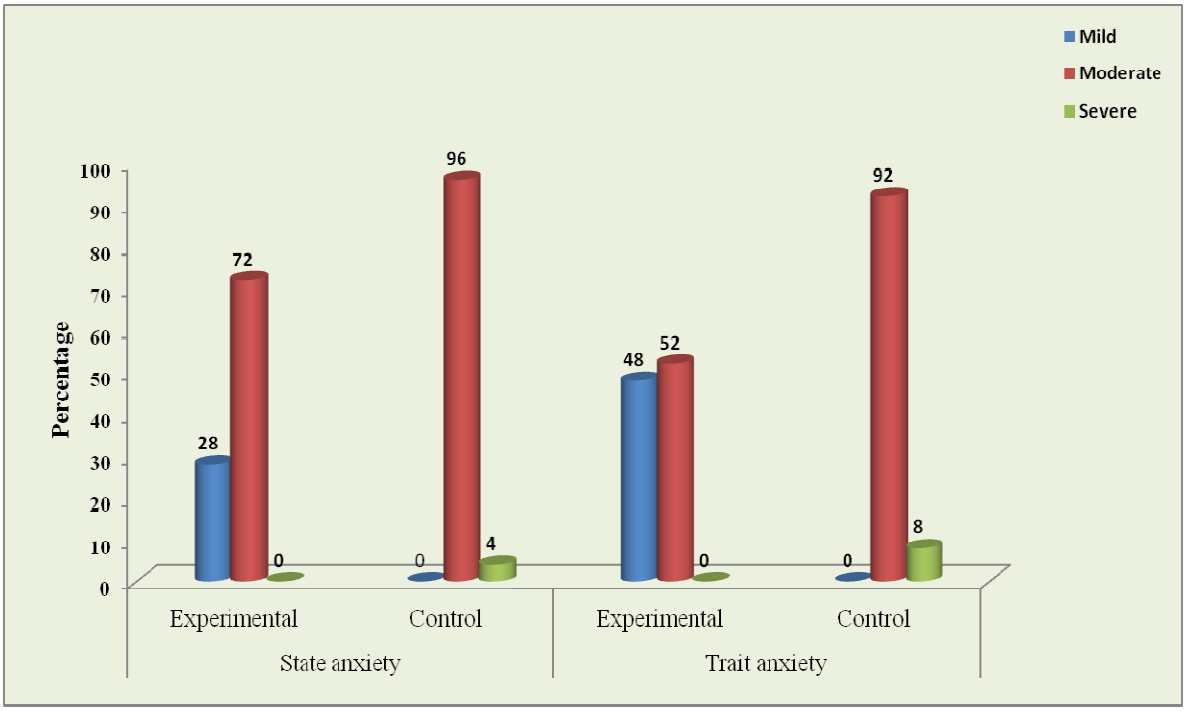

Fig.4.5: Percentage distribution of post operative state and trait anxiety level of mothers of children undergoing cardiac surgery in the experimental and control

Table 4.3: Frequency and percentage distribution of post operative trait anxiety among the mothers of children undergoing cardiac surgery between experimental and control group

N=50

GROUP	Mild (20-40)		Moderate (40-60)		Severe (60-80)		Total	
	No.	%	No.	%	No.	%	No.	%
Experimental	12	48	13	52	0	0	25	50
Control	0	0	23	92	2	8	25	50

The above table 4.3, shows the frequency and percentage distribution of level of post operative trait anxiety among mothers of children undergoing cardiac surgery in the experimental and control group. With regards to trait anxiety of the mother in experimental group 13(75%) had moderate anxiety and 12(48%) had only mild level anxiety and in control group were 23(92%) had moderate anxiety and only 2 (8%) had severe anxiety.

The above finding indicated that samples in experimental group they had mild to moderate anxiety where as in control group moderate anxiety and severe form of anxiety was found.

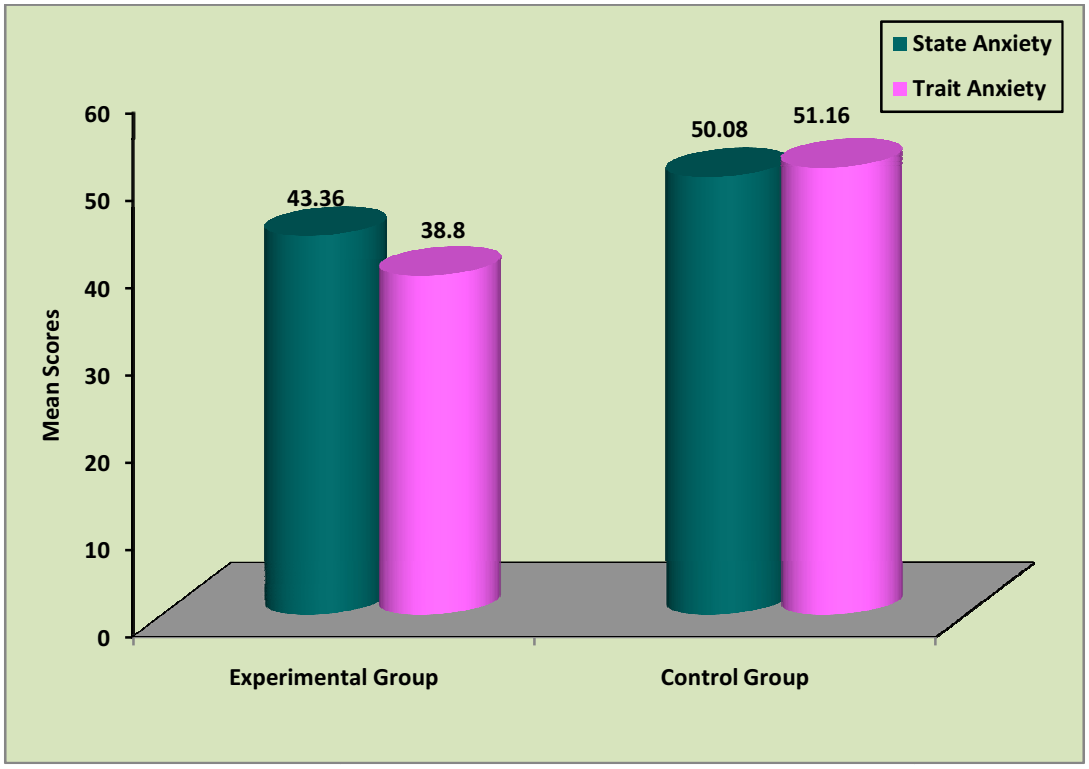

Fig.4.6: Comparison of post operative trait anxiety among the mothers of children undergoing cardiac surgery between experimental and control group

SECTION C: ASSESSMENT OF EFFECTIVENESS OF PRE OPERATIVE ORIENTATION PROGRAM ON LEVEL OF POST OPERATIVE ANXIETY AMONG MOTHERS OF CHILDREN UNDERGOING CARDIAC SURGERY BETWEEN EXPERIMENTAL AND CONTROL GROUP.

Table 4.4: Comparison of post operative state anxiety among the mothers of children undergoing cardiac surgery between experimental and control group

N=50

State anxiety level	N	Mean	S.D	d.f	Independent t test
Experiment	25	43.36	9.48	48	t = 3.13**
Control	25	50.08	6.02		p = 0.003 , S

P<0.05 Statistically significant

The above table 4.4 shows the comparison of post operative state anxiety level among the mothers of children undergoing cardiac surgery between experimental and control group. The mean value of post operative state anxiety of experimental group was 43.36 with standard deviation of 9.48 **(43.36±9.48)** and the control group was 50.08 with standard deviation of 6.02 **(50.08±6.02)**. The independent t test value was 3.13 which indicated statistically significant difference between experimental and control group at p<0.05.

The above table findings indicated that effectiveness of preoperative orientation programme for reducing the post state anxiety among the mothers of children undergoing cardiac surgery.

Table 4.5: Comparison of post operative trait anxiety among the mothers of children undergoing cardiac surgery between experimental and control group

N=50

Trait anxiety level	N	Mean	S.D	d.f	Independent t test
Experiment	25	38.8	4.9	48	t = 5.09***
Control	25	51.16	10.9		p = 0.01 , S

P<0.05 Statistically significant .

The above table 4.5 shows the comparison of post operative trait anxiety level among the mothers of children undergoing cardiac surgery between experimental and control group. The average mean post operative trait anxiety of experimental group was 38.8 with standard deviation of 4.9 **(38.8±4.9)** and the control group was 51.16 with standard deviation of 10.9 **(51.16±10.9)**. The independent t test value was 5.09 which indicated statistically significant difference between experimental and control group at p<0.05.

The above table findings indicated the effectiveness of preoperative orientation programme for reducing the post trait anxiety among the mothers of children undergoing cardiac surgery.

SECTION E: ASSESSMENT OF ASSOCIATION OF POST OPERATIVE ANXIETY AMONG MOTHERS OF CHILDREN UNDERGOING CARDIAC SURGERY IN THE EXPERIMENTAL GROUP WITH THEIR SELECTED DEMOGRAPHIC VARIABLES.

Table 4.6: Association of level of post operative state anxiety among the mothers of children undergoing cardiac surgery in the Experimental group with their selected demographic variable.

Demographic variable	Strait anxiety level						Chi square	Trait Anxiety level						Chi square
	Mild		Moderate		Severe			Mild		Moderate		Severe		
Age of mother	**N**	**%**	**N**	**%**	**N**	**%**		**N**	**%**	**N**	**%**	**N**	**%**	
18-25	0	0	7	28	0	0	χ^2=1.64	2	8	6	24	0	0	χ^2=5.6
26-32	3	12	6	24	0	0	df=3	6	24	3	12	0	0	df=3
33-40	2	8	4	16	0	0	N.S	2	8	4	16	0	0	NS
> 40	1	4	1	4	0	0		2	8	0	0	0	0	
Occupation							χ^2=1.14							**χ^2=5.15 ***
Employed	2	8	2	8	0	0	df=1	4	16	0	0	0	0	**df=1**
Unemployed	5	20	16	64	0	0	N.S	8	32	13	52	0	0	**S**
Type of family							**χ^2=4.5 ***							**χ^2=5.54 ***
Nuclear	3	12	15	60	0	0	**df=1**	6	24	12	48	0	0	**df=1**
Joint	4	16	3	12	0	0	**S**	6	24	1	4	0	0	**S**
Number Of children														
1 child	0	0	0	0	0	0	χ^2=0.92	0	0	0	0	0	0	χ^2=1.43
2 child	6	24	13	52	0	0	df=2	8	32	11	44	0	0	df=2
3 child	3	12	3	12	0	0	NS	3	18	1	4	0	0	NS
>3 Child	0	0	0	0	0	0		1	4	1	4	0	0	
History of consanguineous marriage							χ^2=0.048							χ^2=0.476
Yes	1	4	2	8	0	0	df=1	2	8	1	4	0	0	df=1
No	6	24	16	64	0	0	NS	10	4	12	48	0	0	NS

*P<0.05 statistically significa**nt**

The above table shows the association of level of post operative state anxiety among the mothers of children undergoing cardiac surgery in the Experimental group with their selected demographic variable.

The findings revealed that there was a statistically significant association was found between the level of postoperative state anxiety and the demographic variable, type of family **(χ^2=4.5 at p=0.05)** level and there was no association for other variable.

The findings revealed that there was a statistically significant association was found between the level of postoperative trait anxiety and the demographic variable of occupation **(χ^2=5.15 at p=0.05)** and type of family level **(χ^2=5.54 at p=0.05)** and there was no association for other variable.

The findings indicated that mothers of nuclear family had more state anxiety and mothers of unemployed and nuclear family had more trait anxiety.

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DISCUSSION

CHAPTER – 5

DISCUSSION

The focus of this chapter is to analyze the results in comparison with other research studies and to make recommendations for this study and other settings. It also includes the limitations of this study and implications for further research.

The findings from this study support the importance of pre orientation programme to reduce the anxiety of mothers during the period of cardiac surgery of children. The results and significant findings are discussed under the following headings.

Description of demographic profile

With respect to the age, 9(36%) of them were in the age group of 26-32 years and 8(32%) of them were in the age group of 18-25 years, 6(24%) of them were in the age group33-40 years and 2(8%) of them were above 40 years in the experimental group. Similarly in control group 12(48%) of them were in the age group of 26-32 years, 2(8%) of them were in the age group of 18-25 years, 5(20%) of them were above 40 years and 6(24%) mothers were in the age group o f 33-40.

With regards to the education, 11(44%) of them had under graduate education, 6(24%) had secondary education and an equal percentage of the them 4 (16%) had primary and higher secondary level of education in experimental group. Similarly in control group, 9(36%) mothers had under primary education, 5(20%) of them had secondary education and an equal percentage of the mothers 4 (16 %) had graduate and post graduation level of education and 3(12%) of them had undergone education up to higher secondary.

With respect their occupation status, 21(84%) were unemployed and rest of them 4(16%) were employed in experimental group. Similarly in control group 23(92%) were unemployed and rest of them (2) were employed.

Regarding the religious background, 11 (44%) of the mothers belongs to Hindu and Christian religion and rest of them 3(12%) were Muslims in experimental group, similarly in control group 18(72%) of the mothers were belongs to Hindu religion, followed by Christian 6(24%) and Muslim 1(4%).

With respect to family size, 18(72%) were in nuclear family and 7(28) were belongs to joint family in experimental group. Similarly in control group 20(80%) were in nuclear family and only 5(20%) were in joint family.

When considering number of children in the experimental group, none of them had one children, 19 (76%) of them had two children, 4(16%) of them had 3 children and 2(8%) of them had more than 3 children. Similarly in the control group 17(68%) of them had two children 4(16%) of them had one child, 1(4%) of them had 3 children and 3(12%) of them had more than 3 children.

Considering the type of marriage, 22(88%) mothers had non consanguineous marriage and rest of them 3(12%) had consanguineous marriage in experimental group .Similarly in control group 17(68%) had non consanguineous marriage and rest of them 8(32%) had consanguineous marriage.

T**he first objective of the study was** to **assess the level of post operative anxiety among the mothers of children undergoing cardiac surgery in the experimental and control group**

With regards to level of state anxiety in experimental group, 18(75%) had moderate anxiety, 7(28%) had only mild level anxiety and none of them had severe anxiety and considering the level of anxiety in control group, majority 24(96%) had moderate anxiety and 1 (4%) had severe anxiety.

With regards to trait anxiety of the mother in experimental group 13(75%) had moderate anxiety and 12(48%) had only mild level anxiety and in control group were 23(92%) had moderate anxiety and only 2 (8%) had severe anxiety.

Kosta et al (2015) conducted a study to identify the parental experience of their infant's hospitalization for cardiac surgery. Back ground of the study emphasized that

parents perceptions of what they found difficult, what they would like to be different and what they found to be helpful during their infants hospitalization and surgery for treatment of congenital heart disease. Structure interviews were conducted with 154 parents. Results showed that parents reported range of difficulties from dealing with their baby's unfolding illness. Study concluded that opportunities to improve parents experiences when their infants in hospital exist at an organizational as well as at the clinical level

The second objective of the study was to compare the effectiveness of pre operative orientation programme on level of postoperative anxiety among the mothers of children undergoing cardiac surgery between experimental and control group.

The mean value of post operative state anxiety of experimental group was 43.36 with standard deviation of 9.48 **(43.36±9.48)** and the control group was 50.08 with standard deviation of 6.02 **(50.08±6.02)**. The independent t test value was 3.13 which indicated statistically significant difference between experimental and control group at $p<0.05$.

The average mean post operative trait anxiety of experimental group was 38.8 with standard deviation of 4.9 **(38.8±4.9)** and the control group was 51.16 with standard deviation of 10.9 **(51.16±10.9).** The independent t test value was 5.09 which indicated statistically significant difference between experimental and control group at $p<0.05$.

So the null hypotheses NH_1 stated that **"There is no significant difference in the post level of anxiety among the mothers of children between experimental and control group** was not accepted

The above findings are supported by the following study.

Deyirmenjian P(2006) conducted a quasi experimental study to assess the effectiveness of preoperative patient education for open heart patients .The objective of the study was to examine the impact of preoperative patient education on anxiety and recovery of the patients undergoing open heart surgery. Sample comprised of 70 patients, who met the inclusion criteria were randomly assigned to experimental as well as control group. Anxiety was assessed using the Beck Anxiety Inventory while recovery was measured by physiological outcomes, days of hospital stay, and presence of

complications. The result indicated borderline statistical significance was noted for the experimental group in terms of preoperative and postoperative anxiety.

The third objective of the study was to find out associate the level of post operative anxiety among mothers of children undergoing cardiac surgery in the experimental group with their selected demographic variable

The findings revealed that there was a statistically significant association was found between the level of postoperative state anxiety and the demographic variable, type of family **(χ^2=4.5 at p=0.05)** level and there was no association for other variable.

The findings revealed that there was a statistically significant association was found between the level of postoperative trait anxiety and the demographic variable of occupation **(χ^2=5.15 at p=0.05)** and type of family level **(χ2=5.54 at p=0.05)** and there was no association for other variable

The findings indicated that mothers of nuclear family had more state anxiety and mothers of unemployed and nuclear family had more trait anxiety.

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Hence the NH_2 stated earlier that **"There is no significant association of level of postoperative anxiety among mothers of children undergoing cardiac surgery with their selected demographic variables of experimental group** was not accepted for the demographic variable type of family, occupation and accepted for the other demographic variable.

Wray J (2004) conducted a prospective study to assess the psychological functioning in parents of children undergoing cardiac surgery. Sample size consisted 3 groups of 75 parents of children assessed day before the surgery and 12 months after words. Psychological functioning were assessed with 3 scales included general questionnaire, dyadic adjustment scale, and Utrecht coping list. Study results showed that parents in both groups of children undergoing surgery had significantly higher rates of distress prior to the surgical procedure than did the parents of the healthy children. Study concluded that elevated level of psychological distress prior to surgical procedures which had fallen after one year

SUMMARY,

CONCLUSION,

IMPLICATIONS,

RECOMMENDATIONS

AND LIMITATIONS

CHAPTER – 6

SUMMARY, CONCLUSION, IMPLICATIONS, RECOMMENDATIONS AND LIMITATIONS

This chapter deals with the summary, conclusion, limitation and implications for nursing practice, nursing education, nursing administration and recommendations for further nursing research.

6.1 SUMMARY

Parents experience considerable stress when their child undergoes any serious or potentially fatal interventions including cardiac surgery. A pediatric intensive care unit is a highly stressful environment to most parents. Parents with limited knowledge of care will lead to anxiety, fear and loss of confidence. Mothers become less tense and worried when they get simple information about unit and their baby condition. Unless they receive an appropriate knowledge, the entire family will live in a state of chronic anxiety and it will further result in poor social and physical development of the child. Parents are direct care giver for their children, therefore they should be given proper guidance in regard to the care of CHD so that they could provide and promote optimal health to their child.

The statement of the problem was to assess the effectiveness of pre operative orientation programme on post operative anxiety among the mothers of children undergoing cardiac surgery at selected hospital in Chennai.

The objectives of the study were:

1. To assess the level of post operative anxiety among the mothers of children undergoing cardiac surgery in the experimental and control group
2. To compare the effectiveness of pre operative orientation programme on level of postoperative anxiety among the mothers of children undergoing cardiac surgery between experimental and control group.
3. To associate the level of post operative anxiety among mothers of children undergoing cardiac surgery in the experimental group with their selected demographic variable

The assumption of the study were

- The mother of children undergoing cardiac surgery experience high .level of post operative anxiety.
- Mothers of children undergoing cardiac surgery need some measures to reduce anxiety.
- Mother with less anxiety can provide better care to the child.

The Hypotheses formulated were

NH_1: There is no significant difference in the post level of anxiety among the mothers of children between experimental and control group.

NH_2: There is no significant association of level of postoperative anxiety among mothers of children undergoing cardiac surgery in the experimental group with their selected demographic variables.

The review of literature was derived from primary and secondary sources along with professional experience and expert's guidance in the field of pediatric nursing. This provided a strong foundation for the selection of the problem and also strengthened the ideas for conceptual framework, aided to design the methodology and develop the tool for data collection.

The conceptual framework adopted for the study was based on Modified Jean Watsons Human caring theory.

Research Methodology

A true experimental post test only design was used. The study was conducted at Madras Medical Mission Hospital. 50 samples were selected using simple random sampling technique. Standarized state trait anxiety inventory scale used to assess the anxiety level of mothers of children undergoing cardiac surgery. Pre-operative orientation programme which include information transfer programme and hospital tour was given to experimental group, which took nearly 20-30 minutes. Post operative levels of anxiety among mothers were assessed on the 2^{nd} postoperative day for both experimental and control group with STAI scale which took nearly 10 minutes. The collected data was analyzed using both descriptive and inferential statistics.

Major Findings of the study were.

With regards to level of state anxiety in experimental group, 18(75%) had moderate anxiety, 7(28%) had only mild level anxiety and none of them had severe anxiety and considering the level of anxiety in control group, majority 24(96%) had moderate anxiety and 1 (4%) had severe anxiety.

With regards to level of trait anxiety in experimental group 13(75%) had moderate anxiety and 12(48%) had mild level anxiety and in control group were 23(92%) had moderate anxiety and 2 (8%) had severe anxiety.

The mean value of post operative state anxiety of experimental group was 43.36 with standard deviation of 9.48 **(43.36±9.48)** and the control group was 50.08 with standard deviation of 6.02 **(50.08±6.02).** The independent T test value was 3.13 which indicated statistically significant difference between experimental and control group at $p<0.05$.

The average mean post operative trait anxiety of experimental group was 38.8 with standard deviation of 4.9 **(38.8±4.9)** and the control group was 51.16 with standard deviation of 10.9 **(51.16±10.9).** The independent t test value was 5.09 which indicated statistically significant difference between experimental and control group at $p<0.05$.

The findings revealed that there was a statistically significant association was found between the level of postoperative state anxiety and the demographic variable, type of family **(χ^2=4.5 at p=0.05)** level and there was no association for other variable.

The findings revealed that there was a statistically significant association was found between the level of postoperative trait anxiety and the demographic variable of occupation **(χ^2=5.15 at p=0.05)** and type of family level(**χ^2=5.54 at p=0.05)** and there was no association for other variable

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6.2 CONCLUSION

The study concluded that the preoperative orientation programme was effective in reduction of anxiety among mothers of children undergoing cardiac surgery. It helps them to be more confident and free from tension.

6.3 NURSING IMPLICATIONS

6.3.1 Nursing Practice

- The nurses' primary commitment is to the health, welfare, comfort and safety of the children. Self awareness, knowledge of congenital heart disease, assessment of the child development which enhances the nurse's ability to advocate the effectiveness of the impact of child development.
- Nursing service must improve the facilities of care in hospital setting for informational transfer package of teaching programme regarding cardiac surgery.
- Nurses must receive adequate preparation and training on communication skills that would help them to impart knowledge of mothers.
- The education in the clinical area should be provided in the form of updating the knowledge of the mothers regarding the care of children with congenital heart problems. The community health nurse should also play the various role in clinical setting where she has to diagnose, assess the health of the infant in various aspects of growth and development.

6.3.2 Nursing Education

- Nurse educators not only have a role to educate the students, but also to educate the community people to prepare them and update their knowledge so as to enhance the theory knowledge in to practice
- Nurse educators should develop the skill among nursing students to assess the anxiety level of parents during any surgery of child.
- The nursing students should be educated about the congenital heart disease and its causes, advanced diagnostic procedure and treatment modalities.
- Nurse educator should encourage the students to organize stress reduction programme.
- Students are encouraged to organize mass educational programme for the public to create awareness on need to improve the care of child with cardiac surgery.

6.3.3 Nursing Administration

- The nurse administrator should encourage and facilitate the staff nurses to update their knowledge regarding basics child cardiac surgery and reduction of parent's anxiety.
- Nurse managers can strengthen interdisciplinary and multidisciplinary collaboration with researchers.
- The nurse administrators should motivate the caregivers for the promotion of better child care during cardiac surgery.
- The nurse administrator can organize conferences, continuing education programs, in-service education programs to enhance the knowledge among the staff nurses.
- Nurse administrator should takes steps in formulating policies and protocol in providing parents education.

6.3.4 Nursing Research

- Research should be continued on newer practices and methods of teaching focusing on effective care on paediatric cardiac problems.
- Nurse researcher should focus on identifying the needs of care on cardiac surgery and the importance of prevention of further complication.
- Nurse researcher should publish the study findings and communicate the study findings regarding preoperative orientation programme about the cardiac problems and surgeries.
- The results of this study should only begin to guide educators when selecting teaching strategies for classroom and clinical learning.
- The findings of the present study serve as basis for other health care professionals and to the nursing students to conduct further studies and to find out the effectiveness of pre orientation programme to reduce the anxiety.

6.4 RECOMMENDATION

Based on the study findings, the following recommendations were made

1. A similar study could be done with other teaching strategies to identify mothers' anxiety during child cardiac surgery.
2. Similar study can be conducted in various settings

3. A similar study can be conducted as qualitative study.
4. The intervention tool can be utilized by the health care professional, nurse educators and clinical instructors in their future.
5. Similar study can be done for staff nurses to identify the knowledge on congenital heart disease.

6.5 LIMITATION

There were limited studies on mother's anxiety about cardiac surgeries of their child .

6.6 PLAN FOR RESEARCH DISSEMINATION

The findings of the research will be disseminated through paper presentation either in conferences, workshops at the national and international level or will be published in specialty Journal or in research journals and articles.

6.7 PLAN FOR RESEARCH UTILIZATION

The findings of the research will be utilized in the study setting itself after the approval of thesis since the teaching package is effective in reducing the anxiety.

REFERENCES

REFERENCES

BOOKS:

1. Achar's.(2009).*Textbook of pediatrics* (4th ed.).Hyderabad: Universities Press Pvt.Ltd.
2. Agarwal, K.N. (2014*). Textbook of Pediatrics*. New Delhi : Ane Books Pvt. Ltd.
3. Alan, Glasper. Jim, Richardson (2006). *A Text Book Of Children's & Young People's Nursing*. Elsevier Publications
4. Terri Kyle. (2010). *Essentials of Pediatric Nursing*. New Delhi: Wolters Kluwer Publications.
5. Assuma Beevi, T.M.(2012).*Text Book Of Paediatrics*. Reed Elsevier India Pvt. Ltd.
6. Basavanthappa, B.T. (2007). *Nursing Research.* Bangalore: Jaypee Brothers
7. Burns. (2009). *A practice of Nursing Research* (3rd ed.). London: Elsevier Publications.
8. Fawcett Jacqueline. (1984). *Analysis and Evaluation of Conceptual models of Nursing.* Philadelphia: T.A.Davis Company
9. Gary, R.Fleisher., Stephen, Ludwig.(2010).*Text Book Of Pediatic Emergency Medicine* (6th ed.) Philadelphia: Wolters Kluwer, Lippincott Williams & Wilkins.
10. Ghai. (2013). *Essential Pediatrics* (8th ed.).New Delhi: CBS Publishers & Distributors Pvt. Ltd.
11. Helen Mary Perdita. (2014*). A Text Book Of Child Health Nursing* (1st ed.). New Delhi: Vit Med Pvt. Ltd
12. Jane, Ball, Ruth Bindler., & Kay Cowen.(2013). *Principles Of Pediatric Nursing* (5th ed.) .Julie Levin Alexander Publications
13. Joyce, J., Fitz Patrick., et al.(1983). *Conceptual Models of nursing- Analysis and Application.* Mary land: Apprentice Hall Publisher
14. Kothari. (2007).*Research methodology* (1st ed.). Haryana: New Age Publications
15. Mahajan. B.K., (2001).*Methods in biostatistics* (2nd ed.). New Delhi: Jaypee publications
16. Manoj Yadav. (2013). *A Text Book Of Child Health Nursing With Procedures* (1st ed.). Jalandhar City:S.Vikas & Company Medical Publishers
17. Meharban Singh.(2014). *Essential Pediatrics For Nurses*(3rd ed.). New Delhi: CBS Publishers and Distributers Pvt. Ltd.

18. Munro. (2006). *Statistical method of health care research* (4th ed.). Jharkhand: CBS Publications

19. Nancy, A. Ryan- Wenger.(2007). *Core Curriculum for Primary Care Pediatric Nurse Practitioners.* Elsevier Publications.

20. Nelson. (2008).*Text Book Of Pediatrics* (18th ed.).New Delhi: Elsevier Publications Pvt .Ltd

21. Piyush Gupta. (2011).*Essential Pediatric Nursing*(3rd ed.).New Delhi: CBS Publishers & Distributors Pvt. Ltd.

22. Polit, D.F., & Hungler, B.D. (2006). *Nursing Research Principles and Methods* (8th ed.). Philadelphia: Lippincott Publications.

23. Rimple Sharma.(2013). *Essentials Of Pediatric Nursing*(1st ed.). New Delhi: Jaypee Brothers Medical Publishers.

24. Ross., & Wilson. (2006). *Anatomy and Physiology in Health and illness* (10th ed.). Elsevier publications.

25. Sundar Rao S., et al. (1999).*An Introduction to Biostatistics*. Vellore: Presto Graphic Printers.

26. Suresh, K. Sharma. (2011). *Nursing Research & statistics*,(1st ed.).New Delhi: Elsevier publications.

27. Susan, Rowen, James., & Jean, Weiler, Ashwill. (2009).*Nursing Care Of Children Principles & Practice* (3rd ed.) Noida: Elsevier publications.

28. Tom Lissauer., Graham Clayden., (2007). *Illustrated Textbook of Paediatrics* (3rd ed.). Mosby International Limited.

29. Vishwesar. K., Rao.(2012). *Biostatistics,* (2nd ed.).Bangalore: Jaypee Brothers

30. Wattz, F., C., & Bausell, B. R. (1981). *Nursing Research Design, Statistics and Components Analysis.* Philadelphia: F.A Davis Company

31. Wesley, L. Ruby. (1995). *Nursing theories and models*. Pennsylvania: Spring House Corporation.

32. Wong's. (2009).*Essentials Of Pediatric Nursing* (8th ed). Noida: Elsevier Publications Pvt. Ltd.

33. Zeidner, M., & Endler, N.S. (1996). *Handbook of coping: Theory, Research, Applications* .New York: London Press.

JOURNALS:

34. Aguilar, D.,& Raff, G. W. (2015). Child hood growth patterns following congenital heart disease. *Journal of cardiology in the young*, 25(6), 1044-53.

35. Belliveau, D., & Burton, H.J.(2012). Real time complication monitoring in pediatric cardiac surgery. *Journal of Annals of Thoracic surgery*.94(5), 1596-602

36. Burstorm, A.,& Ojmyr-Joelsson, M.(2015). Adolescents with Congenital Heart Disease and Their parents: needs before Transfer to Adult care. *Journal of Cardiovascular Medicine.*

37. Cheuk, D.K., & Wong, D.M.(2004). Parents understanding of their child 's congenital heart disease. *Journal of Heart*, 90(4),435-9.

38. Costello, J.M., & Graham, D.T.(2010). Risk factors for surgical site infection after cardiac surgery in children. *Journal of Annals of Thoracic surgery*, 89(6), 1833-41.

39. Dean. Re.,() infants with congenital heart disease before, during, and after complex cardiac surgery. *Journal of Heart & Lung transplantation.* 42(6), 399-406.

40. Evans, J.M., Dharmar, M., Meierhenry, E.,& Marcin, J.P.(2014). Association between Down syndrome and in hospital death among children undergoing surgery for congenital heart disease: a US population based Study. *Journal of cardiology,* 7(3),445-52

41. Frank, L.S., & Wray, J. (2010).Parent stress levels during children's hospital recovery after congenital heart surgery. *Journal of pediatric cardiology,* 31(7), 961-8.

42. Geggel, R.L., Horowitz, L.M., & Brown, E.A.(2002) Parental anxiety associated with referral of a child to a pediatric cardiologist for evaluation of a still's murmur. *Journal of Pediatric*. 140(6), 747-52.

43. Green, J., Walters, H.L., & Delius, R.E.(2015).Prevalence and risk factors for upper airway obstruction after pediatric cardiac surgery. *Journal of Pediatric Cardiac surgery.* 166(2), 332-7.

44. Guo, p.,& East, L. (2012). A preoperative education intervention to reduce anxiety and improve recovery among Chinese cardiac patients: a randomized controlled trial. *International journal nursing students*,49 (2),129-37

45. Hearps, S.J.,& Muscara, F. (2014) Psychosocial risk in families of infants undergoing surgery for a serious congenital heart disease. *Journal of cardiology in the young*, 24(4),632-9.

46. Hoehn, K.S., Wernovsky, G.,& Rychik.J. (2004) Parental decision making in congenital heart disease. *Journal of cardiology in the young.*14(3), 309-14

47. Horlen, A.W., & Tungusov, D.(2002). Pediatric cardiac surgery in Northern Russia. Results from an international cooperative program *Journal of Cardiovascular medicine*. 45(3) , 187-92.

48. Huth, M.M., & Broome, M.E. (2003) A study of the effectiveness of a pain management education booklet for parents of children having cardiac surgery. *Journal of Pain management Nursing*, 4(1), 31-9.

49. Kalogianni, A,. Almpani,P., Vastardis, I.(2015).can nurse led preoperative education reduce anxiety and postoperative complications of patients undergoing cardiac surgery. *Journal of Cardiovascular Medicine.*

50. Kane, J,M., & Scalcucci, J.(2013). Using administrative data for mortality risk adjustment in pediatric congenital cardiac surgery. *Journal of pediatric critical Care Medicine. 14(5)491-8.*

51. Kosta, L., Harms, L,. & Franich-Ray, C.(2015) Parental experiences of their infants hospitalization for cardiac surgery. *Journal of Child Care Health Development*

52. Landolt, M.A., Bueche, E.V., & Latal, B., (2011) Predictors of parental quality of life after child open heart surgery; a 6-month prospective study. *Journal of pediatrics*. 158(1), 37-43.

53. Lee, Y.S., Jeng, M.J.,& Tsao, P.C.(2015) .Prognosis and risk factors for congenital Airway Anomalies in children with Congenital Heart Disease : A National wide population –based study in Taiwan. *Journal of pediatrics*, 10(9) ,0137437 .

54. Mellion, K., Uzark, K., Cassedy,a.,(2014).Health related quality of life outcomes in and adolescents with congenital heart disease. *Journal of Pediatrics*, 164(4), 781-788

55. Mendieta- Alcantara, G.G., Santiago-Alcantara, E., (2013). Incidence of congenital heart disease and factors associated with mortality in children born in two Hospitals in the state of Mexico. *Journal of Gaceta Médica de México*, 149(6),617,23

56. Mussatto, K.A, Hoffmann RG, Hoffman, G.M., Tweddell, J.S., (2014) Risk and prevalence of developmental delay in young children with congenital heart disease*. Journal of pediatrics,*133(3), 570-7

57. Nelsons, s.(1996). Pre –admission education for patients undergoing cardiac surgery. *British Journal of Nursing.* 5(6),335-40

58. Nieminen, H,P., & Jokinen, E.V.(2007)Causes of late deaths after pediatric cardiac surgery: a population based study. *Journal of American college of Cardiology*. 50 (13), 1263-71.

59. Nishio, S., Kusunose K., Yamada, H., yamao, M.,(2015). Echocardiographic screening for congenital heart disease in 8819 children ;A report from local community events for children's health care. *Journal of Cardiology,* 66(4), 315-9.

60. Obas, K.A., Leal, J.M., & Zegray, M.(2015) Parental perceptions of transition from intensive care following a child's cardiac surgery. *Journal of Critical care*

61. Paramo-Rodriguez, l., & Mas Pons, R.(2015). An experience of the parents of children with congenital heart disease. *Journal of Gaceta Sanitaria*.

62. Pinto Junior, V.C., Branco, K.M., Cavalcante, R.C., (2015). Epidemiology of congenital heart disease in Brazil. *Journal of Revista Brasileira de Cirurgia Cardiovascular*, 30(2),219-24.

63. Ram Kumari. N, Bhaskara Raju. I, Patnaik, A. N; (2013). Prevalence of rheumatic and congenital heart disease in school children of Andhra Pradesh, South India. *Journal of Cardiovascular medicine*, 4(1), 11-4.

64. Riehle-Colaruso., Autry, A. (2015). Congenital heart defects and receipt of special education services. *Journal of pediatrics*.

65. Salgado. C.l., Lamy, Z.C., & Nina, RV.(2011) Pediatric cardiac surgery under the parents sight : a qualitative study. *Journal of Circulatory Cardiovascular medicine*. 26(1), 36-42.

66. Santiago, M.J., & Lopez – Herce, J.(2012) Evolution and mortality risk factors in children with continuous renal replacement therapy after cardiac surgery. *Journal Revista Espanola DE Cardiologia*. 65(9), 795-800.

67. Staveski, S.L., Zhelva,. & Paul, R. (2015).Pediatric cardiac surgery parent Education Discharge Instruction Program. *Journal of World Pediatric Congenital Heart Surgery*,6(1),18-25

68. Tromp, F., Dulmen, S., & Weert, J.(2004). Interdisciplinary preoperative patient beducation in cardiac surgery. *Journal of Advance nursing*. 47(2),212-22.

69. Turcotte, R.F., & Brozovich, A.(2014). Health care associated infections after cardiac surgery. *Jounal of pediatric Cardiology* .35(8), 1448, 55.

70. Utens, E.M., Versluis-Den Bieman, H.J., & Verhulst, FC.(2000)Psychological distress and style of coping in parents of children awaiting elective cardiac surgery. *Journal of Cardiology in the Young.* 10(3), 239-44.

71. Vijarnsorn,c., Winijkul ,G., & Laohaprasitiporn, D.(2012). Postoperative fever and major infections after pediatric cardiac surgery. *Journal of medical Association Thailand*. 95(6),761-70

72. Wang,S., Elayda, M.A. (2015) Preoperative patient education ;can we improve satisfaction and reduce anxiety. *Journal of Revista* Brasileira de Anestesiologia, 65(1),7-13.

73. Wray, & Sensky, T.(2004).Psychological functioning in parents of children undergoing elective cardiac surgery. *Journal of cardiology in the Young*. 14(2), 131-9.

74. Zhang, C.Y., Jiang Y., (2012). Impact of nurse –initiated preoperative education on postoperative anxiety symptoms and complications after coronary artery bypass grafting. *Journal of Cardiovascular Nursing*. 27(1), 84-8.

75. Zhang, Y,B., & Wng, X.(2013). Postoperative diaphragmatic paralysis after cardiac surgery in children: incidence, diagnosis and surgical management. *Journal of Chinese Medicine.* 126(21), 4083-7.

76. Zhu, J.L., Olsen, J.,& Sorensen, H.T.(2013).Prenatal maternal Bereavement and Congenital Heart defect in offspring: a registry based study. *Journal of Pediatrics*, 131(4), 1225-30.

INTERNET RESOURCES:

77. National Heart, Lung, and Blood Institute (2015) .How Are Congenital Heart Defects Treated. Retrieved from circ.ahajournals.org

78. National Heart, Lung, and Blood Institute (2011) "What Are Congenital Heart Defects. Retrieved from circ.ahajournals.org

79. American heart association report (2010). Congenital heart defects. Retrieved from www.heart.org.congenital heart defects.

80. British heart foundation (2011). Congenital heart disease. Retrieved from https:www.bhf.org.uk

APPENDICES

MMM COLLEGE
OF NURSING
Learn to Serve
A Unit of
The Madars Medical Mission

MMMCON/RL/12/2015 **24th April 2015**

To
Dr. Sivakumar
Cardiologist
Madras Medical Mission
Chennai

Respected Sir,

This is to certify that **Ms. Hema T Vasudevan** is a bonafide student of MMM College of Nursing and currently undergoing MSc(N) in the branch of Child Health Nursing. As part of her Curriculum, she needs to conduct a study in the department of Cardiology for her dissertation. Her problem statement is **"A true experimental study to assess the effectiveness of pre operative orientation programme on post operative anxiety among the mothers of children undergoing cardiac surgery at Chennai"**

The same was accepted by the ethical committee of the MMM Hospital. Kindly permit her to do the main study & pilot study.

Kindly do the needful

Thank You

24/4/15

DR. ROSALINE RACHEL, PH.D
PRINCIPAL
MMM COLLEGE OF NURSING

Ms Hema may continue with kindly study the department for study

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INSTITUTIONAL ETHICS COMMITTEE
THE MADRAS MEDICAL MISSION
No. 4-A, Dr. J.J. NAGAR, MOGAPPAIR, CHENNAI - 600 037, INDIA
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E-mail : icvddoctors@mmm.org.in Website : http://www.mmm.org.in

Date: 23 Feb 2015

To

Ms. Hema
Madras Medical Mission,
Chennai 600037

EC Reg no: ECR/140/Inst/TN/2013

Ref: A study to assess the effectiveness of pre operative orientation programme on post operative anxiety among the mothers of children undergoing cardiac surgery at selected hospital chennai

Sub: Ethics Committee approval of study document for the above mentioned study.

Dear Ms. Hema,

We have received from you 06+1 copies of each of following study related document submitted vide letter dated: 10 Jan 2015.

1. Protocol

At the Ethics Committee meeting held on 14 Feb2015 your referenced letter and the above documents were examined and discussed. After due consideration, the committee has decided to approve the above-mentioned document.

The following members were present at the meeting held on 14 Feb 2015 at 9-30 AM at Mount Tabour Lounge, Madras Medical Mission.

Name & Qualification	Primary Scientific or Non scientific Specialty	Affiliation with the institution	Gender
Dr. M.S. Ramachandran, MBBS,MD,FRCP,FICP,DSC(HONS), Prof.Director medicine(Rtd)	Chairperson	No	M
Dr V M Kurian, MS, MCh, DPMR. Sr. Consultant cardiovascular Surgeon Madras Medical Mission	Member secretary	Yes	M

INSTITUTIONAL ETHICS COMMITTEE
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Dr Ajit Mullasari, MD DNB DM, Director of cardiology, Madras Medical Mission	Member Clinician	Yes	M
Dr J. Ezhilan MD, DM , DNB, FNB Sr. Consultant Cardiologist, Madras Medical Mission	Member Clinician	Yes	M
Dr. Suma Malini Victor, MBBS, DNB., Consultant Cardiologist, Madras Medical Mission	Member, Clinician	Yes	F
Dr. Chitrasree V, MBBS,DCP Coordinator, Consultant Lab services, Madras Medical Mission	Member, Basic Medical Scientist	Yes	F
Rev.Fr. Ninan Chacko, MA,DPS, Chaplain Theologist, ICVD, Madras Medical Mission	Non-Clinical Member Theologist/Layperson	Yes	M
Mr. Ravi Kumar Paul, LLB Paul & Paul B.A., B.L., Advocates Chennai.	Member Legal Expert	No	M
Dr. C.B Tharani, M.D. Pharmacology	Pharmacologist	No	F
Dr. Philomina Mariados, PhD(Sociology), Dean, College of Health Science, Madras Medical Mission	Member, Lay person	Yes	F

The Committee expects from the Principal Investigator to report the clinical study on annual basis.

It was to be noted that neither you nor any of your proposed study team members were present during the decision-making procedures of the Ethics Committee.

Yours truly,

Signature: _____ **Date:** 23/02/2015

Name: Dr V M Kurian
Title: Member secretary

INSTITUTIONAL ETHICS COMMITTEE
MADRAS MEDICAL MISSION
No. 4 - A, Dr. J.J. NAGAR
MOGAPPAIR, CHENNAI - 600 037.

APPENDIX – C

INFORMED CONSENT FORM

I confirm that I have been explained and have clearly understood the purpose of the study .I understood the purpose of the study. I understand that my participation is voluntary and I am free to withdraw from the study.

I understand that trained researcher will administer the questions which will take about an hour and all information will be confidential.

I agree to take part in above study voluntarily

Participants sign:

Researcher sign:

APPENDIX – D

INTRODUCTION

Good morning,

I Ms. Hema.T. Vasudevan, M.Sc (N) Student of MMM College Of Nursing, Mogappair, Chennai is conducting a study to assess effectiveness of pre-orientation programme on post operative anxiety among te mothers of children undergoing cardiac surgery.

I request you to participate in this study, by giving your free and frank opinions being asked, your responses will responses will be kept confidential and used only for the research study.

Further I request you to kindly answer all question to the best of your knowledge,

Thanking you.

PART – I: DEMOGRAPHIC VARIABLE

1. Age of mother
    a. 18-25
    b. 26-32
    c. 33-40
    d. >40

2. Educational level
    1. Primary, Secondary
    2. Higher secondary
    3. Graduate
    4. Post graduate

3. Occupation
    a. Employed
    b. Unemployed

4. Religion
    a. Hindu
    b. Christian
    c. Muslim

5. Type of family
    a. Nuclear
    b. Joint

6. Number of children
    a. 1
    b. 2
    c. 3
    d. Above 3

7. History of consanguineous marriage
    a. Yes
    b. No

SELF -EVALUATION QUESTIONARE STAI FROM Y-1

DIRECTIONS

A number of statements which people have used to describe themselves are given below. Red each statements and then circle the appropriate number to the right of the statement to indicate how you fell right now, that is, at this moment. There are no right or wrong answers. Do not spend too much time on any one statements but give the answer which seems to describe your present feelings best.

S.NO	ITEMS	NOT AT ALL	SOME WHAT	MODERATELY SO	VERY MUCH SO
1	I feel calm.	1	2	3	4
2	I feel secure.	1	2	3	4
3	I am tense.	1	2	3	4
4	I feel strained.	1	2	3	4
5	I feel at ease.	1	2	3	4
6	I feel up set.	1	2	3	4
7	I am presently worrying over possible misfortunes	1	2	3	4
8	I feel satisfied.	1	2	3	4
9	I feel frightened.	1	2	3	4
10	I feel comfortable.	1	2	3	4
11	I feel self – confident.	1	2	3	4
12	I feel nervous.	1	2	3	4
13	I am jittery.	1	2	3	4
14	I feel indecisive.	1	2	3	4
15	I am relaxed.	1	2	3	4
16	I feel content.	1	2	3	4
17	I am worried.	1	2	3	4
18	I feel confused.	1	2	3	4
19	I feel steady.	1	2	3	4
20	I feel pleasant.	1	2	3	4

DIRECTIONS

A number of statements which people have used to describe themselves are given below. Read each statements and then circle the appropriate number to the right of the statement to indicate how you generally feel. There are no right or wrong answers. Do not spend too much time on any one statements but give the answer which seems to describe how you generally feel.

S.NO	ITEMS	ALMOST NEVER	SOMETIMES	OFTEN	ALMOST ALWAYS
21	I feel pleasant.	1	2	3	4
22	I feel nervous and restless.	1	2	3	4
23	I feel satisfied with myself.	1	2	3	4
24	I wish I could be as happy as others seem to be.	1	2	3	4
25	I feel like a failure.	1	2	3	4
26	I feel rested.	1	2	3	4
27	I am calm, cool, and collected.	1	2	3	4
28	I feel that difficulties are pilling up so that I cannot overcome them.	1	2	3	4
29	I worry too much over something that really doesn't matter.	1	2	3	4
30	I am happy.	1	2	3	4
31	I have disturbing thoughts.	1	2	3	4
32	I lack self confidence.	1	2	3	4
33	I feel secure.	1	2	3	4
34	I make decisions easily.	1	2	3	4
35	I feel inadequate.	1	2	3	4
36	I am content.	1	2	3	4
37	Some unimportant thought runs through my mind and bothers me.	1	2	3	4
38	I take disappointments so keenly that I cant put them out of my mind.	1	2	3	4
39	I am a steady person.	1	2	3	4
40	I get in a state of tension or turmoil as I think over my recent concerns and interests.	1	2	3	4

பகுதி – அ

1. தாயின் வயது
   அ) 18 – 25
   ஆ) 26 – 33
   இ) 33 – 40
   ஈ) 40க்கும் மேல்

2. படிப்பு
   அ) ஆரம்ப நிலைக்கல்வி
   ஆ) உயர்நிலைக்கல்வி
   இ) மேல்நிலை கல்வி
   ஈ) பட்டப்படிப்பு மற்றும் பட்டமேற்படிப்பு

3. பணி
   அ) அலுவலகப்பணி
   ஆ) சுய வேலை
   இ) இல்லத்தரசி

4. மதம்
   அ) இந்து
   ஆ) கிறித்துவர்
   இ) இஸ்லாமியர்

5. குடும்பத்தின் வகை
   அ) சிறிய குடும்பம்
   ஆ) பெரிய குடும்பம்
   இ) கூட்டுக்குடும்பம்

6. குழந்தைகளின் எண்ணிக்கை
   அ) 1
   ஆ) 2
   இ) 3
   ஈ) 3க்கும் மேல்

7. திருமணம் சார்ந்த வரலாறு உள்ளதா?
   அ) ஆம்
   ஆ) இல்லை

குழந்தையின் விவரம்:

8. வயது
   அ) 1 – 3
   ஆ) 3 – 6
   இ) 6 – 9
   ஈ) 9 – 12

9. குழந்தையின் பாலினம்
   அ) ஆண்
   ஆ) பெண்

10. நோயால் அவதிப்படும் காலம்
   அ) 1 – 4 வருடம்
   ஆ) 4 – 8 வருடம்
   இ) 8 – 12 வருடம்
   ஈ) 12 வருடங்களுக்கு மெல்

சுய மதிப்பீடு வினாக்கள்

கீழ் உள்ள வாக்கியங்கள் அனைத்தும் தங்களை பற்றி தங்களாகவே விவரிக்க கொடுக்கப்பட்டுள்ளது. இந்த வாக்கியங்கள் அனைத்தையும் படித்து இந்த தருணத்தில் நீங்கள் உணரும் உணர்வுகளை கூறுங்கள். இதில் சரியான மற்றும் தவறான பதில்கள் என்று எதுவும் இல்லை. எனவே அதில் நேரம் எடுத்துக்கொள்ளாமல் கொடுக்கப்பட்ட வாக்கியங்களை உங்களின் மதி நுட்பம் கொண்டு விளங்க வைக்கவும்.

வ.எண்	பொருளடக்கம்	அளவுக்கு அதிகமாக	அதிகமாக	சில சமயம்	அவசியமில்லை
1	நான் சாந்தமாக உணர்கிறேன்.	1	2	3	4
2	நான் அச்சமற்று உணர்கிறேன்.	1	2	3	4
3	நான் மன அழுத்தத்துடன் உணர்கிறேன்.	1	2	3	4
4	நான் கடினமாக உணர்கிறேன்.	1	2	3	4
5	நான் நிம்மதியாக உணர்கிறேன்.	1	2	3	4
6	நான் வருத்தப்படுகிறேன்.	1	2	3	4
7	நிகழ்வதை நினைத்து மிகவும் கவலைப் படுகிறேன்.	1	2	3	4
8	நான் திருப்திகரமாக உணர்கிறேன்.	1	2	3	4
9	நான் பயந்து இருக்கிறேன்.	1	2	3	4
10	நான் ஆறுதலாக உணர்கிறேன்.	1	2	3	4
11	நான் தன்னம்பிக்கையுடன் இருக்கிறேன்.	1	2	3	4
12	நான் பதற்றமாக உணர்கிறேன்.	1	2	3	4
13	நான் தளர்வடைகிறேன்.	1	2	3	4
14	நான் முடிவெடுக்கயியலாமல் உள்ளேன்.	1	2	3	4
15	நான் நிம்மதியாக உள்ளேன்.	1	2	3	4
16	நான் உள்ளடக்கத்தோடு இருக்கிறேன்.	1	2	3	4
17	நான் கவலைப்படுகிறேன்.	1	2	3	4
18	நான் குழப்பமானவனாய் உணர்கிறேன்.	1	2	3	4
19	நான் நினைவோடு இருக்கிறேன்.	1	2	3	4
20	நான் மகிழ்ச்சியாக இருக்கிறேன்.	1	2	3	4

சுய மதிப்பீடு வினாக்கள்

கீழ் உள்ள வாக்கியங்கள் அனைத்தும் தங்களை பற்றி தங்களாகவே விவரிக்க கொடுக்கப்பட்டுள்ளது. இந்த வாக்கியங்கள் அனைத்தையும் படித்து இந்த தருணத்தில் நீங்கள் உணரும் உணர்வுகளை கூறுங்கள். இதில் சரியான மற்றும் தவறான பதில்கள் என்று எதுவும் இல்லை. எனவே அதில் நேரம் எடுத்துக்கொள்ளாமல் கொடுக்கப்பட்ட வாக்கியங்களை உங்களின் மதி நுட்பம் கொண்டு விளங்க வைக்கவும்.

வ.எண்	பொருளடக்கம்	எப்பொழுதும் கிடையாது	சில சமயங்களில்	எப்போதாவது	எப்பொழுதுமே
21	நான் புத்துணர்ச்சியாக உணர்கிறேன்.	1	2	3	4
22	நான் நிலையில்லாமல், நரம்பு தளர்ச்சியாய் இருக்கிறேன்.	1	2	3	4
23	நான் எனக்குள்ளே நிரைவாக உணர்கிறேன்.	1	2	3	4
24	நான் மற்றவர்களை போலவே மகிழ்ந்திருக்க வேண்டும் என்று நினைப்பேன்.	1	2	3	4
25	நான் தோல்வியடைவதாய் நினைக்கிறேன்.	1	2	3	4
26	நான் அமைதியை உணர்கிறேன்.	1	2	3	4
27	நான் சாந்தமும், தன்மை சேர்ந்தவனாய் உணர்கிறேன்.	1	2	3	4
28	தடைகள் வந்து நிறைய நான் அதை தகர்க்க முடியாமல் தவிக்கிறேன்.	1	2	3	4
29	பயனற்ற விஷயங்களுக்காக மிகவும் வருந்துகிறேன்.	1	2	3	4
30	நான் மகிழ்ச்சியாக இருக்கிறேன்.	1	2	3	4
31	எனக்குள் அமைதியை கலைக்கும் எண்ணங்கள்.	1	2	3	4
32	நான் தன்னம்பிக்கையற்றவன்.	1	2	3	4
33	நான் பாதுகாப்பாக உள்ளேன்.	1	2	3	4
34	நான் முடிவுகளை சுலபமாக எடுப்பேன்.	1	2	3	4
35	நான் அரைகுறையாக நினைப்பவன்.	1	2	3	4
36	நான் அனைத்தும் தெரிந்தவன்.	1	2	3	4
37	தேவையற்ற நினைவுகள் என் நினைவுக்குள் ஓடிக் கொண்டே இருக்கும் மற்றும் அவைகள் என்னை கலங்கப்படுத்தும்.	1	2	3	4
38	என்னை அறியாமல் நான் தன்னம்பிக்கை இழந்துதது போன்று உணர்விகள்.	1	2	3	4
39	நான் நிலையானவன்.	1	2	3	4
40	நான் மன அழுத்தமாக உணரும் போதும் என் புதிய விருபங்களையும், கோரிக்கை களையும் உணர்வேன்.	1	2	3	4

അമ്മയെ സംബന്ധിക്കുന്ന വിവരങ്ങൾ

1 മാതാവിന്റെ വയസ്സ്

(പതിനെട്ട്- ഇരുപത്തിയഞ്ച്, ഇരുപത്തിയാറ്- മുപ്പത്തിര്, മുപ്പത്തിമൂന്ന്- നാൽപ്പത്, നാൽപ്പതിന് മുകളിൽ)

2 വിദ്യാഭ്യാസനിലവാരം

(പ്രൈമറി, സെക്കൻഡറി,ഹയർ, സെക്കൻഡറി, ഗ്രാജുവേറ്റ്,പോസ്റ്റ് ഗ്രാജുവേറ്റ്)

3 തൊഴിൽ

(എംപ്ലോയിഡ്, അൺ എംപ്ലോയിഡ്)

4 മതം

(ഹിന്ദു, ക്രിസ്ത്യൻ, മുസ്ലിം)

5 കുടുംബത്തിന്റെ തരം

(അണുകുടുംബം, കൂട്ടുകുടുംബം)

6 കുട്ടികളുടെ എണ്ണം

(ഒന്ന്, ര്, മൂന്ന്, മൂന്നിന് മുകളിൽ)

7 രക്തബന്ധത്തിലുള്ള വിവാഹമാണോ?

(അതെ, അല്ല)

സ്റ്റേയിറ്റ്-ട്രെയിറ്റ് ആൻസൈറ്റി ഇൻവെന്ററി **വൈ-ഒന്ന്**

പേര്:

വയസ്സ്:

ചെയ്യേ വിധം

ആളുകൾ പൊതുവേ അവനവനെ വിലയിരുത്തുന്ന പ്രസ്താവനകൾ താഴെതന്നിരിക്കുന്നു. ഓരോ പ്രസ്താവനയും വായിച്ചതിനുശേഷം ഇപ്പോൾ ഈ നിമിഷം നിങ്ങൾക്ക് അത് എങ്ങനെ അനുഭവപ്പെടുന്നു എന്ന് ഉചിതമായ പ്രസ്താവനയുടെ ചുറ്റും വൃത്തത്തിൽ വരച്ച് രേഖപ്പെടുത്തുക. അവിടെ ശരിയും തെറ്റും ഉത്തരങ്ങൾ ഇല്ല. ഒരുപാട് സമയം ഒരു പ്രസ്താവനയ്ക്കുവേി ചിലവാക്കാതിരിക്കാൻ ശ്രദ്ധിക്കുക. പക്ഷേ അത് നിങ്ങളുടെ ഇപ്പോഴത്തെ വികാരങ്ങളുടെ ശരിയായ വിലയിരുത്തൽ ആയിരിക്കണം.

		ഒരിക്കലുമില്ല	ചിലപ്പോൾ	മിതമായ തരത്തിൽ	അധികമായി
1	എനിക്ക് ശാന്തി അനുഭവപ്പെടുന്നു	1	2	3	4
2	എനിക്ക് സുരക്ഷിതത്വം അനുഭവപ്പെടുന്നു	1	2	3	4
3	എനിക്ക് പിരിമുറുക്കം അനുഭവപ്പെടുന്നു	1	2	3	4
4	എനിക്ക് ആയാസം അനുഭവപ്പെടുന്നു	1	2	3	4
5	എനിക്ക് സ്വസ്ഥത അനുഭവപ്പെടുന്നു	1	2	3	4
6	എനിക്ക് അസ്വസ്ഥത അനുഭവപ്പെടുന്നു	1	2	3	4
7	വരാനിരിക്കുന്ന ദൗർഭാഗ്യങ്ങൾ എന്നെ അലട്ടുന്നു	1	2	3	4
8	എനിക്ക് സംതൃപ്തി അനുഭവപ്പെടുന്നു	1	2	3	4
9	എനിക്ക് ഭയം അനുഭവപ്പെടുന്നു	1	2	3	4
10	എനിക്ക് സ്വാന്തനം അനുഭവപ്പെടുന്നു	1	2	3	4
11	എനിക്ക് ആത്മവിശ്വാസം അനുഭവപ്പെടുന്നു	1	2	3	4
12	എനിക്ക് പരിഭ്രമം അനുഭവപ്പെടുന്നു	1	2	3	4
13	എനിക്ക് പരിഭ്രമം ആണ്	1	2	3	4
14	എനിക്ക് പതർച്ച(ദൃഡചിത്തതയില്ലായ്മ അനുഭവപ്പെടുന്നു)	1	2	3	4
15	എനിക്ക് സ്വാസ്ഥ്യം അനുഭവപ്പെടുന്നു	1	2	3	4
16	എനിക്ക് സംതൃപ്തി അനുഭവപ്പെടുന്നു	1	2	3	4
17	എനിക്ക് വേവലാതി അനുഭവപ്പെടുന്നു	1	2	3	4
18	എനിക്ക് ചിന്താക്കുഴപ്പം അനുഭവപ്പെടുന്നു	1	2	3	4
19	എനിക്ക് ഏകാഗ്രത (ദൃഡത) അനുഭവപ്പെടുന്നു	1	2	3	4
20	എനിക്ക് സന്തോഷം അനുഭവപ്പെടുന്നു	1	2	3	4

സ്റ്റേയിറ്റ്-ട്രെയിറ്റ് ആൻസൈറ്റി ഇൻവെന്ററി **വൈ - ർ**

പേര്:

വയസ്സ്:

ചെയ്യേ വിധം

ആളുകൾ പൊതുവേ അവനവനെ വിലയിരുത്തുന്ന പ്രസ്താവനകൾ താഴെതന്നിരിക്കുന്നു. ഓരോ പ്രസ്താവനയും വായിച്ചതിനുശേഷം ഇപ്പോൾ ഈ നിമിഷം നിങ്ങൾക്ക് അത് എങ്ങനെ അനുഭവപ്പെടുന്നു എന്ന് ഉചിതമായ പ്രസ്താവനയുടെ ചുറ്റും വൃത്തത്തിൽ വരച്ച് രേഖപ്പെടുത്തുക. അവിടെ ശരിയും തെറ്റും ഉത്തരങ്ങൾ ഇല്ല. ഒരുപാട് സമയം ഒരു പ്രസ്താവനയ്ക്കുവേി ചിലവാക്കാതിരിക്കാൻ ശ്രദ്ധിക്കുക. പക്ഷേ അത് നിങ്ങളുടെ ഇപ്പോഴത്തെ വികാരങ്ങളുടെ ശരിയായ വിലയിരുത്തൽ ആയിരിക്കണം.

		തീരെ ശരിയല്ല	ശരിയല്ല	കുറേശ്ശെ	പ്രത്യേകശരിയാണ്
21	എനിക്ക് സന്തോഷം അനുഭവപ്പെടുന്നു.....1	2	3	4
22	എനിക്ക് സങ്കോചവും അസ്വസ്ഥതയും അനുഭവപ്പെടുന്നു.....1	2	3	4
23	എനിക്ക് ആത്മസംതൃപ്തി അനുഭവപ്പെടുന്നു.....1	2	3	4
24	മറ്റുള്ളവരെപ്പോലെ സന്തോഷമായിരുന്നവെങ്കിൽ എന്ന് ഞാനും ആഗ്രഹിക്കുന്നു 1	2	3	4
25	ഞാൻ ഒരുപരാജയം ആണെന്ന തോന്നലുാകുന്നു,.....1	2	3	4
26	എനിക്ക് വിശ്രാന്തി അനുഭവപ്പെടുന്നു.....1	2	3	4
27	എനിക്ക് സമാധാനവും ശാന്തിയും സമചിത്തതയും അനുഭവപ്പെടുന്നു.....1	2	3	4
28	എനിക്ക് തരണം ചെയ്യാൻപറ്റാത്ത വിധം പ്രതിബന്ധങ്ങൾ കൂടിക്കൂടി വരുന്നതായി അനുഭവപ്പെടുന്നു.....1	2	3	4
29	വളരെ നിസ്സാരമായകാര്യങ്ങൾ പോലും എന്നെ അലട്ടുന്നു.....1	2	3	4
30	ഞാൻ സന്തോഷവതിയാണ്.....1	2	3	4
31	എനിക്ക് അലസോരപ്പെടുത്തുന്ന ചിന്തകൾ ഉ.....1	2	3	4
32	എനിക്ക് ആത്മവിശ്വാസക്കുറവ് അനുഭവപ്പെടുന്നു.....1	2	3	4
33	എനിക്ക് സുരക്ഷിതത്വംഅനുഭപ്പെടുന്നു.....1	2	3	4
34	ഞാൻവളരെ പെട്ടെന്ന് തീരുമാനങ്ങൾ എടുക്കുന്നു.....1	2	3	4
35	ഞാൻകഴിവില്ലാത്തവനാണ് എന്ന തോന്നലുാകുന്നു.....1	2	3	4
36	ഞാൻസംതൃപ്തയാണ്.....1	2	3	4
37	ചില അനാവശ്യമായ കാര്യങ്ങൾ മനസ്സിലൂടെ കടന്നു പോകുന്നത് എന്നെ അലട്ടുന്നു.....1	2	3	4
38	ഇച്ഛാഭംഗങ്ങളെ ഞാൻകാര്യമായി എടുക്കുന്ന കാരണം.അവയെ എന്റെ മനസ്സിൽ നിന്ന് മാറ്റാൻ കഴിയുന്നില്ല.....1	2	3	4
39	ഞാൻ ഒരു ദൃഡചിത്തതയുള്ള വ്യക്തിയാണ്.....1	2	3	4
40	എന്റെ ഇപ്പോഴത്തെ താല്പര്യങ്ങളെപ്പറ്റിയും കാര്യങ്ങളെപ്പറ്റിയും ചിന്തിക്കുമ്പോൾ എനിക്ക് സംഘർഷം അനുഭവപ്പെടുന്നു.....1	2	3	4

State Trait Anxiety Inventory for Adults Scoring Key (from Y-1, Y-2)

S.NO	NOT AT ALL	SOME WHAT	MODERATELY SO	VERY MUCH SO	S.NO.	ALMOST NEVER	SOMETIMES	OFTEN	ALMOST ALWAYS
1	4	3	2	1	21	4	3	2	1
2	4	3	2	1	22	1	2	3	4
3	1	2	3	4	23	4	3	2	1
4	1	2	3	4	24	1	2	3	4
5	4	3	2	1	25	1	2	3	4
6	1	2	3	4	26	4	3	2	1
7	1	2	3	4	27	4	3	2	1
8	4	3	2	1	28	1	2	3	4
9	1	2	3	4	29	1	2	3	4
10	4	3	2	1	30	4	3	2	1
11	4	3	2	1	31	1	2	3	4
12	1	2	3	4	32	1	2	3	4
13	1	2	3	4	33	4	3	2	1
14	1	2	3	4	34	4	3	2	1
15	4	3	2	1	35	1	2	3	4
16	4	3	1	4	36	4	3	2	1
17	1	2	3	4	37	1	2	3	4
18	1	2	3	4	38	1	2	3	4
19	4	3	2	1	39	4	3	2	1
20	4	3	2	1	40	1	2	3	4

PRE-OPERATIVE ORIENTATION PROGRAMME

ON

CARDIAC SURGERY

TOPIC	**:**	Pre-operative orientation programme on child cardiac surgery
GROUP	**:**	Mothers of children undergoing cardiac surgery
PLACE	**:**	Madras Medical Mission Hospital Mogappair, Chennai
TEACHING AID	**:**	Power point presentation & Hospital tour.
TEACHING METHOD	**:**	Lecture Cum Discussion, excursion

CENTRAL OBJECTIVES:

At the end of the programme the mothers will acquire adequate knowledge about cardiac surgery and to develop desirable attitude in applying the knowledge and skill in hospitalization and in home.

SPECIFIC OBJECTIVES:

At the end of the session mothers will be able to

1. state the meaning and type of cardiac surgery
2. describe the guidelines for preoperative preparation
3. explain the hospital polices and routine care.
4. explain the after care and follow up of cardiac surgery

S.No.	Time	Specific objectives	Content	A.V. Aids	Teaching activity	Learning activity	Evaluation
1	3 minutes	Meaning and type of cardiac surgery	A congenital heart defect is a problem with the structure of the heart. It is present at birth. Congenital heart defects are the most common type of birth defect. The defects can involve the walls of the heart, the valves of the heart, and the arteries and veins near the heart. They can disrupt the normal flow of blood through the heart. The blood flow can slow down, go in the wrong direction or to the wrong place, or be blocked completely. **Pediatric heart surgery** Heart surgery in children is done to repair heart defects, a child is born with congenital heart defects and heart diseases a child gets after birth that need surgery. The surgery is needed for the child's wellbeing. There are many kinds of heart defects. Some are minor, and others are more serious. Defects can	PPT	Teacher introduced the topic	listening	What is congenital heart disease

S.No.	Time	Specific objectives	Content	A.V. Aids	Teaching activity	Learning activity	Evaluation
			occur inside the heart or in the large blood vessels outside the heart. Some heart defects may need surgery right after the baby is born. For others, your child may be able to safely wait for months or years to have surgery. Surgery is used to treat a wide range of heart defects. Surgeries may range from the simple such as closing a hole or tying off a vessel, to the complex such as switching vessels or repairing valves **TYPES** • Mitral valve repair • Aortic valve repair • TOF step wise procedure • ASD closure • VSD closure • Palliative artery banding • Complete repair				

S.No.	Time	Specific objectives	Content	A.V. Aids	Teaching activity	Learning activity	Evaluation
			Open-Heart Surgery in Children Open-heart surgery refers to operations performed on the heart that require a patient being placed on the heart-lung bypass machine. The heart-lung bypass machine takes over the function of the heart and lungs to provide oxygenated blood to the body. The heart can be stopped with a solution called "cardioplegia." Cardioplegia is a cold, high-potassium solution. It also protects the heart muscle while it is stopped. The heart itself can then be opened and repair can be accomplished in a bloodless, still environment. In some situations, when on the cardiopulmonary bypass machine, the heart can be operated upon while still beating, but emptied. This				

S.No.	Time	Specific objectives	Content	A.V. Aids	Teaching activity	Learning activity	Evaluation
			usually occurs when the repair is on the right side and there are no holes between the left and right sides of the heart.				
2.		Describe the guidelines for preoperative Preparation	**PHYSICAL PREPARATION** Preparing children from procedures decrease their anxiety promotes their co-operation, supports their coping skills and may teach them new ones and facilities a feeling of mastery in experiencing a potentially stressful events. • Monitor temperature, pulse, respiration, body weight, skin rash or any other abnormalities. • Record the findings and report to the appropriate authority. Child may need many different tests: Blood tests (complete blood count, electrolytes, clotting factors, and "cross match") X-rays of the chest Electrocardiogram (EKG, or ECG)	PPT	The teacher discussed the general information about infection	listening	

S.No.	Time	Specific objectives	Content	A.V. Aids	Teaching activity	Learning activity	Evaluation
			Echocardiogram (ECHO, or ultrasound of the heart) Cardiac catheterization • Give nothing by mouth for prescribed period prior to surgery or at least 4-6 hours before surgery. • Check for any loose teeth secure these and report. • Remove nail polish and make up if any. • Eye glasses hearing aids may worn to the OT or can be given to parents. • Ask the child to empty the bladder to prevent bladder distension. • Administer pre-operative medication on time. • Make sure that all pre-operative procedures are completed. • Explain about nothing per oral at least 4-6 hours prior to the surgery or as directed by the anaesthesiologist				

S.No.	Time	Specific objectives	Content	A.V. Aids	Teaching activity	Learning activity	Evaluation
			• Demonstrate the equipments to be used post operatively such as O_2 mask, IV fluids, urinary catheter • Describe the post operative discomfort and pain which may be relieved by medications. • Explain about the recovery room care and setup. • Demonstrate the procedures to prevent post operative complications such as deep breathing and coughing exercise such as collection of investigation reports, anesthetic check up, dressing bowel clearance, NG tube insertion preparing the surgical site • Provide all OT dress • Parental presence and support **PSYCHOLOGICAL PREPARATION** • Discuss about the type of surgery • Explain the information to the child parents • Explain about pre operative medication which				

S.No.	Time	Specific objectives	Content	A.V. Aids	Teaching activity	Learning activity	Evaluation
			can cause discomfort • Discuss about anaesthesia and operating room set up and transportation to OT. • Do not remove favorite toys and other objects to prevent loss of security encouraged child to play with cap, grown, mask, and gloves with the dressed doll • Assure the child that parent will be nearby and waiting for him or her				
3.		Explain the hospital polices and routine	**HOSPITAL POLICIES** • All children should be weighed and have their pulse rate and temperature recorded on admission. • All communication should be comprehensible to the parents and the child. • Children should be allow to wear suitable clothing before surgery after surgery should wear hospital uniform. • Explain the possible risk of the surgery.	PPT	The teacher explained about hospital polices and routine	Listening	

S.No.	Time	Specific objectives	Content	A.V. Aids	Teaching activity	Learning activity	Evaluation
			• Anathestics explained the anesthesia procedure to the parents. • Inform the timing before surgery. • Explain the visiting hours 4-7 pm. • Advice the parents to maintain the hygiene to prevent infection. • The surgical team will give you instructions about care. • Activity level. • The chest incision should be kept clean and dry. • Swimming or soaking in a bath tub is usually not permitted for at least a few weeks after surgery. • Sponge bath or quick shower. • Avoid rough and vigorous play. • Call the doctor once the child develop fever chest pain and redness over the incision. • Diet iron and protein rich diet. • If administer walfarin avoid egg yolk and leafy vegetables.				

S.No.	Time	Specific objectives	Content	A.V. Aids	Teaching activity	Learning activity	Evaluation
4.		Explain the after care and follow up of cardiac surgery	**Postoperative Care** After surgery, infants and children will return to the intensive care unit (ICU) to be closely monitored during recovery period. The course of every child after surgery is different, but there are some consistent trends. Children generally arrive in the ICU on a ventilator with a breathing tube. • Children who have "straightforward" surgeries are generally extubated within 24 hours • Children who have more complicated surgeries are on the ventilator for days or, in some cases, weeks. Each child's recovery happens at a different pace. The child will be kept as comfortable as possible with several different medications, some which relieve pain, and some which relieve anxiety.		Teacher explain about the after care and follow up of cardiac surgery	Listening	What is post operative care

S.No.	Time	Specific objectives	Content	A.V. Aids	Teaching activity	Learning activity	Evaluation
			The staff will also be asking for input as to how best to soothe and comfort your child. While in the pediatric ICU, the child will have their vital signs reviewed and recorded every hour. The nurses in the PICU are specifically trained to take care of post-operative heart patients. Depending on your child's surgery, over the next 1-3 days, the chest tubes (drainage tubes) and Foley catheter will be removed. Once your child's blood pressure is stable and he/she is no longer on IV medications for blood pressure control, the arterial monitoring line will be removed. The central line (long IV) will most likely stay until your child is discharged from the hospital. Once recovery criteria have been met, the child will move out of the PICU into the intermediate				

S.No.	Time	Specific objectives	Content	A.V. Aids	Teaching activity	Learning activity	Evaluation
			children's special care unit. **Discharge & Recovery** When the child's day of discharge has arrived, one of the pediatric cardiovascular nurse coordinators will meet with you to review all your medications, appointments and discharge instructions. It will be necessary to have a chest X-ray completed as well as a discharge ECHO before leaving. Provided an opportunity to ask any additional questions before leaving the hospital. **Activity:** Child will be on sternal precautions until 6 weeks after surgery. The amount and type of activity allowed in the month after discharge are variable and depend on the type of operation and the function of the heart. The best guide is to let the child do whatever he/she can without becoming short of				

S.No.	Time	Specific objectives	Content	A.V. Aids	Teaching activity	Learning activity	Evaluation
			breath. Each child's exercise tolerance is different; therefore, activities vary depending on each child. Children often limit themselves, but caregivers should observe play closely to watch for signs of fatigue. **Returning to school or daycare** After surgery, your child should not be exposed to large crowds of people for at least 2 weeks. This is to avoid exposure to people who may have colds, viruses or communicable diseases during your child's recovery. **Rest** The child may take longer or more frequent naps for the first week after surgery, as well as sleep longer at night. This is normal after surgery and				

S.No.	Time	Specific objectives	Content	A.V. Aids	Teaching activity	Learning activity	Evaluation
			should not be cause for alarm. **Bathing** Infants and children may take a tub bath or shower five days after surgery. After the fifth day, daily baths are encouraged, but please take special care and not let the incision soak under the water. **Pain control** Child's pain should be treated adequately. For most children after heart surgery, Tylenol (acetaminophen) and/or Motrin (ibuprofen) are adequate for post-operative pain. Follow the package directions for dosages and monitor your child for pain relief. **Wound Care** Stitches placed beneath the skin are usually used to close the operative site, and these stitches will				

S.No.	Time	Specific objectives	Content	A.V. Aids	Teaching activity	Learning activity	Evaluation
			eventually dissolve. There is often a knot of thread at the top and bottom of the incision. This may be cut off at the follow up office visit 1-2 weeks after surgery, or they will simply fall off with time. It is common to have scabbing along the incision. There is commonly a suture made of nylon used to close the chest tube site. This will fall out over time or will be removed at the first visit at the surgeon's office. It is common for there to be redness immediately around the wound. If a reddened area spreads out from the wound, is hot to the touch, has any fluid coming from the wound, or if your child has a temperature greater than 100.5° F it may be a sign of infection.				

LETTER SEEKING EXPERTS OPINION AND SUGGESTION FOR THE CONTENT VALIDITY TOOL

FROM

Mrs. HEMA .T. VASUDEVAN

1st Year M.Sc. Nursing

MMM College of Nursing

Mogappair West

Chennai – 60.

TO

_____

_____

_____

Forward Through

The Principal
MMM College of Nursing
Mogappair West
Chennai – 60.

Respected Sir\Madam,

Sub: Expert opinion for content validation of research tool.

I, Hema, 1st year M. Sc. Nursing student (Medical and Surgical Nursing) of MMM College of Nursing, request your good self, if you could kindly accept to validate my research tool on topic "**effectiveness of pre operative orientation programme on post operative anxiety among the mothers of children undergoing cardiac surgery"** at a selected hospital, Chennai.

I would be obliged if you would kindly affirm your acceptance to the undersigned with your valuable suggestion on this topic. I shall send details of my study along with the research tool.

Thanking you in anticipation.

Yours Sincerely

Ms. Hema.T.Vasudevan

LIST OF EXPERTS FOR CONTENT VALIDITY

1. **Dr. Siva Kumar**
   Cardiologist,
   Madras Medical Mission Hospital,
   Chennai.

2. **Dr. Shankaranarayan**
   Neonatologist,
   Kanchi Kamakoti Childs Trust Hospital,
   Chennai

3. **Mrs. Deepa**
   Reader,
   Mohamed Sathak A.J.College of Nursing,
   Chennai.

4. **Mrs. Jamuna**
   Reader,
   Apollo College of Nursing,
   Chennai.

5. **Mrs. Sathya**
   Reader,
   Apollo College of Nursing.
   Chennai.

CONTENT VALIDITY CERTIFICATE

This is to certify that , **MS. HEMA .T. VASUDEVAN ,** student studying M.Sc(Nursing) I year at MMM College of Nursing, Chennai -91, affiliated to The Tamil Nadu Dr. M.G.R. Medical University, Tamil Nadu her data collection tool on the topic , **" A true experimental study to assess the effectiveness of pre operative orientation programme on post operative anxiety among the mothers of children undergoing cardiac surgery at selected hospital Chennai."**is validated and suggested the necessary changes to execute.

Signature of the expert

Designation and Address

Dr. K. SIVAKUMAR,
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Date: CHENNAI

Place: 30.11.2015

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Signature of the expert

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Signature of the expert

Designation and Address

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Date: 16.2.15

Place: Chennai

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34, Rajiv Gandhi Road, Chennai-603 103

CONTENT VALIDITY CERTIFICATE

This is to certify that, **MS. HEMA .T. VASUDEVAN ,** student studying M.Sc(Nursing) I year at MMM College of Nursing, Chennai -91, affiliated to The Tamil Nadu Dr. M.G.R. Medical University, Tamil Nadu her data collection tool on the topic , **" A true experimental study to assess the effectiveness of pre operative orientation programme on post operative anxiety among the mothers of children undergoing cardiac surgery at selected hospital Chennai."**is validated and suggested the necessary changes to execute.

29/04/15

Signature of the expert

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Signature of the expert

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APPENDIX – G

CERTIFICATE OF ENGLISH EDITING

TO WHOM SO EVER IT MAY CONCERN

This is to certify that the dissertation work **"Effectiveness of pre operative orientation programme on post operative anxiety among the mothers of children undergoing cardiac surgery at a selected setting in Chennai."** done by Ms. Hema T Vasudevan II year M.Sc. Nursing in MMM college of nursing, Chennai is edited for English language appropriateness by Fr. Moncy Kaleeckal M.A M.Ed.

21/12/15

Signature

SACRED HEART MATRIC. HIGHER SECONDARY SCHOOL
MARIA NAGAR, PADI,
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CERTIFICATE OF TAMIL EDITING

TO WHOM SO EVER IT MAY CONCERN

This is to certify that the dissertation work **"Effectiveness of pre operative orientation programme on post operative anxiety among the mothers of children undergoing cardiac surgery at a selected setting in Chennai."** done by Ms.Hema T Vasudevan II year M.Sc. Nursing in MMM college of nursing, Chennai is edited for Tamil language appropriateness by

Signature

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CERTIFICATE OF MALAYALAM EDITING

TO WHOM SO EVER IT MAY CONCERN

This is to certify that the dissertation work **"Effectiveness of pre operative orientation programme on post operative anxiety among the mothers of children undergoing cardiac surgery at a selected setting in Chennai.** "done by Ms.Hema T Vasudevan II year M.Sc. Nursing in MMM college of nursing, Chennai is edited for Malayalam language appropriateness by Asharaf. M.V

Signature

Asharaf. M.V
H.S.A. Malayalam
G.V.H.S.S.
Kadathuruthy

APPENDIX – H

PLAGIARISM REPORT

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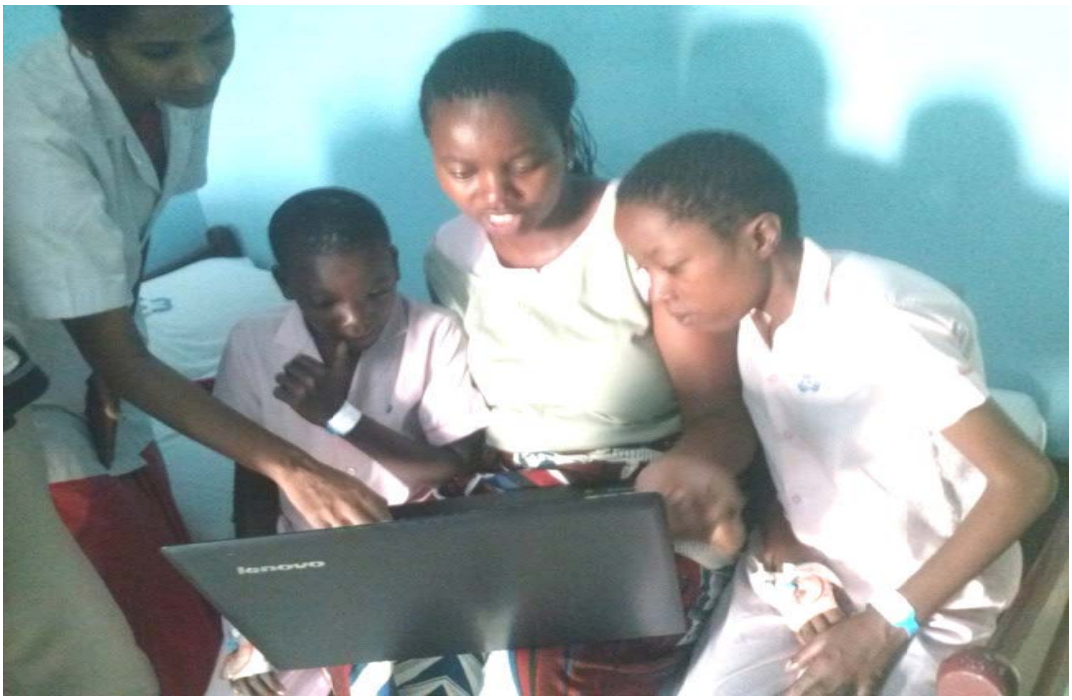
APPENDIX – I

PHOTOGRAPHS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